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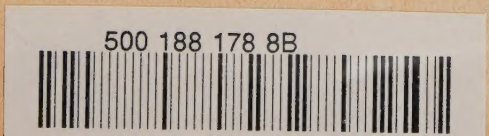

A CENTURY OF ARCHÆOLOGICAL DISCOVERIES

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Frontispiece

A CENTURY OF ARCHÆOLOGICAL DISCOVERIES

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UNIVERSITY OF STRASSBURG

TRANSLATED BY
BETTINA KAHNWEILER

WITH A PREFACE BY
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IN THE UNIVERSITY OF OXFORD

WITH ILLUSTRATIONS

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DEDICATED

IN LOVE AND SINCERITY

TO THE FRIENDS OF MY YOUTH

AND MY FELLOW-STUDENTS

ALEXANDER CONZE

BERLIN, ITALY, GREECE

AND

EUGEN PETERSEN

KIEL, BONN, ROME

AUGUST, 1905

PREFACE

A WORK by my friend, Professor Michaelis, needs no introduction to archæologists, among whom for forty years he has held a distinguished place. And it should need no introduction to English scholars, who owe to the writer admirable works on their treasures, the Parthenon, and the Nereid Tomb of Xanthus, as well as a great Catalogue of the Ancient Marbles in English private houses.

In the present book Professor Michaelis gives an account of archæological discovery during the last century. It is a work showing intimate knowledge; but it is no dry summary; rather, a record of what the writer, watching all with the greatest interest, learned as the scroll of excavation and research was gradually unrolled. This infusion of a personal element has made the book more interesting to the reader. At the same time it has had the effect of preventing the treatment from being quite even on all sides. Excavation and discovery which has especially come under the notice of Professor Michaelis, and especially, as he says in his Preface, the work of German explorers has been treated of at greater length, often with graphic details which dwell in the memory. Other discoveries which he has not watched with the same closeness, or which have been published in a form less accessible to him, are spoken of, comparatively, with brevity. In the former

category come the discovery of the tomb at Trysa (Giölbaschi) in Lycia, of which the reliefs are now removed to Vienna, and the excavations at Pergamon, which have so greatly enriched the museums of Berlin. In the second category come the recent activities of the British and American schools at Athens. Professor Michaelis has done ample justice to the brilliant series of English discoveries in Greece which began with Cockerell and ended with Newton. But more recent excavations such as those of the British School at Megalopolis and in Melos, and that of the American School at Corinth, have scarcely come in for their fair share of notice.

This failure in complete impartiality is not to English and American readers a great disadvantage. For in the "Journal of Hellenic Studies," the "Annual of the British School of Athens," the "American Journal of Archæology," they can read full accounts of all that their countrymen bring to pass in Greece. And now the very useful "Year's Work in Classical Studies" gives every year a summary of the results reached. With us it is the French and German discoveries which are less well-known; and thus the present work will serve well to fill a gap in our literature.

Since the foundation of the British School at Athens in 1883, and that of the American School a little earlier, these two institutions have become the centres of continuous archæological work on a number of Greek sites. Among the sites which have occupied English scholars may be mentioned Naucratis in Egypt, Paphos and Salamis in Cyprus, Phylakopi in Melos, and Præsus and Palaikastro in Crete. Light won from most of these sites has been thrown on the prehistoric age in Greek lands, rather on what is really Hellenic. It is a Darwinian age, when the search for origins seems to fascinate men more than the search for what is good in

itself : and the fact is that our eyes are somewhat dazzled by the brilliant discoveries of Schliemann, Dörpfeld and Evans. Of these we have heard much, but strange to say, there is no book which gives a comprehensive account of the epoch-making discoveries at Olympia.

The most recent task of the British School, the excavation of Sparta, is one which will satisfy every Philhellene, and we may hope thus to be able alike to verify and to vivify phases of Greek history. The feat of Mr. Dickins in recomposing the colossal sculptural group by Damophon at Lycosura, sheds a fresh light on the Macedonian age in Greece. Many other such tasks await the students of those British Universities which still keep Classics in the front line of education.

The work of the American School has been carried on at Eretria, Icaria, and Thoricus, and in Bœotia. It has made a memorable excavation on the site of the Argive Heræum. But it has especially devoted itself to the digging up of ancient Corinth, a task rendered very hard by the depth of earth which has accumulated over the old city. Dr. Hill, Director of the American School, writes to the translator of this book : " At Corinth we have found and excavated Peirene, located the Agora with its long Greek and Roman colonnades, identified the famous old Doric temple as that of Apollo, found the Theatre, the Odeum, and the fountain of Glauke, discovered in the Agora the ' Old Spring,' a simple Greek fountain-house dating from about B.C. 500, and near it the foundations of a small temple."

It would not be suitable in this place to write more as to English and American discovery in Greece ; what I have said is intended only to prevent undervaluing of the zeal and success of our English-speaking colleagues.

The year 1875 marks an epoch in the history of Greek excavation. Up to that time the object of the excavator

had been, in the first place, to recover for the museums of his own country some of the admirable works of art of ancient Hellas. Between 1800 and 1875 untold riches of art flowed into the British Museum, from Egypt, from Koyunjik, from Athens, Phigaleia, Lycia, and Halicarnassus. The museums of Paris, Berlin, Munich followed suit; and if they grew more slowly it was only because they were served with less enterprise. But when the Germans undertook to excavate at Olympia, it was stipulated that all that was discovered should remain in Greece; and, in fact, it has remained at Olympia itself. Nothing since discovered in Greece, in the great excavations of the Athenian Acropolis, of Delphi, Delos and other sites, has left the country. Turkey and Crete are copying the laws of Greece in such matters. All that the western nations are now allowed to gain by work in the East is knowledge. We have reached the scientific stage of discovery. And since knowledge has thus been put in the place of actual spoil, it is natural that excavation has been conducted in a more orderly and scientific way, find spots and circumstances of finding being recorded with great exactness.

It is necessary to confess that since 1875 the share of England in the work of discovery has diminished, while the shares of France and Germany have increased. The circumstances of the time fully justified the removal to London of such remains as those of Phigaleia and Halicarnassus; and all impartial persons, including Professor Michaelis, allow that by carrying away the sculpture of the Parthenon, Lord Elgin rescued what is really the property of the civilized world from certain injury and probable destruction. Still, we cannot blame Greece and Italy for being determined in future to keep the works of art, the possession of which constitutes the great distinction of those countries in the eyes of the

educated world. And we must now accept the changed circumstances, and do what we can for historic and artistic progress, without hope of results in the form of works of ancient art for our museums. We must learn to work for science, not for reward. This fact throws the more emphasis on what Professor Michaelis has to say in his last chapter, which is one of the most important. It is a sketch of the recent scientific progress of archæology, progress furthered as much by methodical study in museums and libraries as by actual excavation. The sketch is by necessity brief, and of course many of Professor Michaelis' views may be disputed; but the great point is to have an outline, however slight, drawn by so experienced and so sane an authority, in true perspective and proportion.

To the translator, as I know, the work has been a labour of love, done "for science, not for reward." I have read the proofs and suggested a few alterations.

P. GARDNER

AUTHOR'S PREFACE

"ARCHÆOLOGY of the spade" and its results form the subject of this volume. By the term archæology is meant the archæology of art; the products of civilization in so far as they express no artistic character will only be mentioned incidentally. Thus Epigraphy has been excluded, nor are coins and gems included, for they can hardly be regarded as discoveries. Another limitation is due to the fact that my own studies have been confined to Classic Art, and that my knowledge of the art of other lands has, for the most part, only come to me at second hand. Hence the difference in treatment. My main object has been to give an account of the rise, the diffusion, and the deepening of our knowledge of Greek art. No comprehensive treatment of this interesting subject having yet appeared, I have felt impelled to fill this gap. Although I have not taken part in any excavations, yet for the last fifty years I have followed the work of others with close interest and have moreover frequently had opportunities of acquiring direct knowledge: this, it seems to me, is a qualification for the task.

The modest work of the sheaf-binder must follow that of the reaper.

If most space has been devoted to the German excavations and investigations, it is mainly because my facilities have been greater.

The readers, whom I am addressing, are not mainly the archæologists by profession—to whom I hardly offer anything new—but rather archæological students, and, above all, the great circle of readers who have preserved an interest in and a love for ancient art.

In this new edition, I have made use of many suggestions by friends. I am indebted, above all, to M. S. Reinach, Dr. Borchardt, and Dr. Messerschmidt. And I wish to express my sincere thanks to my friend Sidney Colvin.

In closing may I quote from Sir C. Newton's letter, 2 Feb., 1877, in which he expressed his thanks to the Faculty of Philosophy at Strassburg, for the degree of Doctor of Philosophy: "It is from Germany that I always sought that sound and thorough information on every branch of archæological and philological study which no other country has produced in this generation; it is to Germany that I have always looked for encouragement and for appreciation of labour which has occupied me for many years, and which I now feel not to have been in vain."

A. MICHAELIS

STRASSBURG
February, 1908

TRANSLATOR'S NOTE

I AM indebted to Professor Gardner for the suggestion to translate Professor Michaelis' admirable book. Professor Michaelis generously granted the desired permission, and it affords me great satisfaction to be able to lay the book before English readers. The selection of illustrations has been rather difficult, inasmuch as Professor Michaelis' horizon is so extended. Choice has largely been confined to classic lands, and Mr. Murray has exercised great care to procure the best.

May the "Century of Archæological Discoveries" prove of service, as Professor Michaelis desires, "to archæological students and, above all, to the great circle of readers who have preserved an interest in, and a love for, ancient art." May it awaken in the student and reader a desire to see and study glorious Hellas!

My sincere thanks are due to Professor Gardner for constant advice and assistance. Although his time is of utmost value, he has been good enough to read the translation and help in the selection of illustrations. For all his kindness I can only express my deep gratitude.

B. K.

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A CENTURY OF ARCHÆOLOGICAL DISCOVERIES

I

OUR KNOWLEDGE OF ANCIENT ART UP TO THE CLOSE OF THE EIGHTEENTH CENTURY

EVEN if, towards the close of the last century, the taste of the general public, in Germany at least, became somewhat estranged from the study of classical antiquities, this change of interest affected archæology only in a minor degree. For decades important discoveries followed one another in the field of ancient art, and succeeded in attracting even a wider circle; in fact, archæology may be classed among the conquering sciences of the nineteenth century. For never had such eager and confident efforts been made to win back from the earth her treasures of ancient art, and never before had the labour of the spade been rewarded with so rich and manifold a reward. The present generation still retains vivid recollections of the latest phases of this activity, but it would be unjust to forget the trials and successes of former generations, extending back to the beginning of the century.

The object of the following pages is to bring the work of those researches before the eyes of the reader. If not all the discoveries of the nineteenth century, at least all important ones shall be duly recorded. But stress will be laid upon single discoveries only in so far as they show

definite progress, and advance our knowledge of ancient art. For every discovery not only enriches science with greater knowledge, but constantly suggests new problems for solution.

To explain this complete change in our knowledge and views—in consequence of the development and change of material during the last century—it will be convenient to give a short outline of the condition of affairs existing at the end of the eighteenth century. We must revert to the era of the Renaissance and to the early times of the rediscovery of ancient art. Rome, in consequence, becomes the main object of our preliminary consideration.

From an old description of Rome, which dates from the age of Constantine, we learn that in the first half of the fourth century, before Rome had been plundered to enrich Constantinople and devastated again and again by invasions, the city still possessed an almost incredible number of public statues. Two colossi of unusual height (one measured thirty-four metres) and 22 large equestrian statues are mentioned, besides 80 gilt and 73 chryselephantine images of gods; to these may be added 3785 bronze statues (those of marble are not even mentioned). How do these compare with our Siegesallee, or any of our cities richest in statues?

If, however, at the end of the Middle Ages (the middle of the fifteenth century) we question Poggio Bracciolini, one of the chief representatives of the Renaissance, he laments that five marble statues only remain of all this splendour—four on the Monte Cavallo and one in the Forum. Only one bronze equestrian statue remained which was supposed to represent Constantine; the learned Poggio, however, more correctly recognized it as one of the earlier Roman emperors (Marcus Aurelius, not Septimius Severus, as he assumed). To these may be added the impressive remains of buildings which

became the models for the Renaissance; above all the Pantheon, the Colosseum, and the theatre of Marcellus, the massive vaults of the Baths of Caracalla, of Diocletian, and of Constantine, remains of temples, columns and triumphal arches, etc.

In its architecture ancient Rome still retained much of its grandeur. But even in plastic art, things were not quite as bad as we might be led to suppose from Poggio's rhetorical plaints. At this time antique sculpture had been collected at three different points in Rome. Some, in fact, had never been covered by the rubbish heaps of the Middle Ages.

On the Quirinal still stood, on their late antique bases, the great marble statues of the Dioscuri beside their horses, hence giving to the mount the name of Monte Cavallo. Traditional tales of medieval times connected these with the names of Phidias and Praxiteles, found on the pedestals, and also with a fountain and a female figure, entwined by a serpent. At the base of the two colossi a hall had been added containing three statues—of Constantine and his sons—these had presumably come from the neighbouring Thermæ of Constantine. This hall had been used as a Court of Justice; here, as elsewhere, superstition brought about an association between works of former times and judicial usages. Lastly, to the antiques of value on the Monte Cavallo may be added two colossal reclining river gods, probably remains of a huge fountain; to-day they adorn the steps leading to the Capitol. These, with the Dioscuri, came to typify Rome, and these images are rarely absent from old pictures or plans of the city.

The papal palace of the Lateran was surrounded by quite different collections. In the spacious square stood the equestrian statue of Marcus Aurelius, at times looked upon by popular traditions as that of the knight or the great peasant who, once upon a time, by a stratagem

took an oriental prince prisoner before the adjacent gate, and thereby saved Rome. Again, at other times, the statue was identified as that of Constantine, the first political patron of Christianity. This statue likewise witnessed judicial proceedings in the tenth century; a rebellious official was once hanged opposite the horse, at another time the body of an anti-pope was thrown beneath it. We hear that another bronze of the Lateran, the famous she-wolf, placed outside on one of the towers of the palace, marked a common place of execution during the Middle Ages. Hence an old illustration represents the she-wolf flanked by two amputated hands. The Thorn Extractor, the Sacrificial Attendant (Camillus), a colossal head and a globe complete the bronze collection of the Lateran, which survived the many vicissitudes of medieval times.

The Capitol likewise possessed a collection of antiquities in the Middle Ages. In the Piazza of the Capitol, which formerly served as a market-place, stood the tombstones of the wife and one of the sons of Germanicus. These had been brought from the Mausoleum of Augustus, and contained a cavity used henceforth as the standard measure for corn and salt. Upon the stairs leading to the Capitol with its large Hall of Justice stood the famous group admired by Michael Angelo—that of a horse torn by a lion (now in the upper court of the Capitoline Museum)—as an emblem of retributive justice. Sentence of death was pronounced here, and as a rule carried out at the Tarpeian rock near by. Cola di Rienzi met his death near the lion group in 1354. Reliefs of sarcophagi lined the stairs as far as the church of Aracoeli. An obelisk stood near the side entrance; below, near the Forum, lay the river-god who later as Marforio played a part with Pasquino in the life of the people of Rome.

Thus these three elevated sites recalled ancient sculpture. There remained here and there in public places or

in churches single works of art, and to-day names of streets still recall the antiques to which they owe their origin. But what was this in comparison with the splendour of former times!

In Rome the collector's zeal began to manifest itself during the last decades of the fifteenth century. It had appeared somewhat earlier, although less successfully, in Florence. In 1471 Pope Sixtus IV, by transferring the bronzes of the Lateran to the Capitol, laid the foundation of its collection, which increased rapidly and offered a shelter especially to the historical sculpture of ancient Rome. Julius II, a nephew of Sixtus, established in 1506 the Belvedere Court, in the summer palace of the Vatican. Here such famous masterpieces as the Apollo, the Laocoon, the Ariadne, the Nile, the Tiber, and the Torso brought the æsthetic aspects of ancient sculpture into prominence. The first to follow the examples of the popes were the cardinals (Valle, Cesi, Grimani, Carpi, etc.), followed later by other distinguished men. To increase these valuable possessions private excavations were frequently undertaken. In the time of Paul III the group of the Bull and the colossal reposing Herakles were discovered in the Baths of Caracalla, and acquired by the papal family of Farnese.

Julius III was the last pope to rear a monument to his humanistic and antiquarian tastes in the Villa Papagiulio. Then the ecclesiastical reaction appeared. The Court of the Belvedere was closed, cardinals such as Ferdinando de Medici, Ippolito d'Este, Cardinal Montallo (Sixtus V), who had furnished their villas as treasure houses of antique art, became rare. The Medici acquired among other treasures the Niobe group. Instead, however, the collector's zeal had awakened in the middle classes; different members of the Mattei family distinguished themselves. Not only were antiques gathered in great collections, but many of the treasures that the soil con-

tinued to yield were distributed throughout the city for decorative purposes; courts, stairs, fountains, galleries, and palaces were adorned with statues, busts, reliefs, and sarcophagi, applied in such a manner as to become incorporated in contemporary art, and thereby to gain fresh life.

The seventeenth century continues to be a time of eager searching and collecting. Although the Court of the Belvedere remains sunk, like a sleeping beauty, in oblivion, and its great treasures hidden behind wooden stable doors, yet no reigning pope is now without a cardinal nephew, who is a collector. In consequence, the palaces of the Aldobrandini, Borghese, Ludovisi, Barberini, Pamfili, Chigi, etc., are uninterruptedly being filled with antiques. Cardinal Ludovico Ludovisi demonstrated the astonishing power at the disposal of a cardinal nephew, when he formed within a year, 1622–3, a collection of more than 300 antiques—and what a collection! Perhaps the finest collection Rome has ever seen, comprising Greek originals such as the Dying Gaul and the group of Gauls belonging to it. It was difficult to compete with the all-powerful papal families, but the Giustiniani of Genoa, for example, succeeded in establishing three important collections within a short time in their palace in the city near the Pantheon and in their two villas near the Lateran and outside the Porta del Popolo. Pope Innocent X (whose features Velasquez has perpetuated in a masterly portrait) founded about the middle of the century the new Capitoline Museum, and the learned Jesuit father, Athanasius Kircher of Fulda, laid the foundation of the valuable collection of Italian antiquities in the palace of his order, the Collegium Romanum.

During two centuries untold antiquities had been gathered in Rome, while outside of Rome very little was recorded. On the other hand, Rome had begun early to

distribute her treasures. Venice, Paris, Madrid, Munich, and Prague had acquired some Roman antiquities; and Florence had begun to remove to the banks of the Arno the most famous statues of the Villa Medici.

But this centrifugal movement gained even greater strength in the eighteenth century. The Roman families were impoverished more and more, and prized their inherited treasures only as a means of bettering their finances. The Giustiniani began, the Chigi and Albani followed. The courts of Madrid and Dresden had been the chief purchasers, but soon wealthy Englishmen appeared on the scene, and, with the aid of art dealers, formed small or large collections, which in the seclusion of their country houses, were practically withdrawn from view, and afforded neither pleasure nor profit to the lover of art. Other treasures followed their owners into foreign lands, the Farnese antiques were removed to Naples, and those of the Medici to Florence.

In this manner acquaintance with antique sculpture was extended beyond Rome. However, Rome ran the danger of losing her old supremacy. To forestall this danger the Capitoline Museum was enlarged, enriched, and newly opened in the year 1734, chiefly the work of the two popes Clement XII and Benedict XIV and their energetic advisers. A generation later the only private collection formed during the century was added to it, the collection in the villa of Cardinal Albani. Its spacious halls had been tastefully adorned with carefully selected works of art.

This nearly completes the list of antiques accessible to Winckelmann, when he came to Rome in the middle of the eighteenth century to combine the hitherto unorganized material for his "History of Art." The material offered was entirely from Roman collections. But what did these collections contain? A few original works of late Greek times, such as the group of the Gauls and

the Laocoon; a number of characteristic reliefs, statues and busts of the Roman Empire—all the others were not originals, but Roman copies of Greek works, of the most different periods. The major part was the work of artisans, in which it is hard to trace the character and charm of the originals. Even the famous Apollo Belvedere is only distinguished from others by the comparative excellence of the reproduction. All these were scattered in the most diverse places, and frequently hidden in obscure nooks and corners, so as to render a comparative study exceedingly difficult. Nor had the records of ancient writers on art been collected or sifted, but had to be gathered from all corners; there only existed for artists a catalogue of artists by Junius. If we consider all this we forget the imperfections in Winckelmann's "History of Art," and are moved with amazed admiration for the ardent zeal and penetrating artistic insight that enabled the Brandenburg shoemaker's son to discern with a seer's eye the true nature of things and their historical relations through the specious and distorting medium of appearances, and out of such materials to rear an edifice destined to endure for many years.

Winckelmann was, however, able to look beyond the Roman horizon at two points. The treasures recovered at Herculaneum were now most jealously guarded at the royal palace of Portici. As is well known, after the first excavations in 1711—to which the "Herculanerinnen" in Dresden belong—orders were given prohibiting further work. Not till 1738 did the Government resume excavations, which were continued for more than a quarter of a century, until 1766. In the discovery of the "*Villa dei papiri*," in 1753, the climax was reached. Not only the library of the owner, who had been greatly interested in Epicurean philosophy, was discovered, but also about one hundred works of plastic art, bronze as well as marble busts and statues. Although these again were only

copies of earlier works, they offered new aspects through the hitherto unexampled number of bronze figures found, thereby forcibly indicating how inadequately the bronze of the originals had been rendered in the usual marble copies. Again the vast number of antique bronze utensils that were found furnished a glimpse of the wealth of beautiful form with which the handicrafts adorned the whole life of an ancient city—even a second or third class provincial town.

Wall paintings offered entirely new problems for investigation; not only purely decorative designs, but large pictures as well. For Rome had presented little in this respect: some obliterated remnants in the so-called Thermæ of Titus (more correctly Nero's "Golden House") and the Aldobrandini Nuptials. In this respect the antiquities of Herculaneum offered impressions and solutions of great variety, thereby widening the limited horizon of our knowledge of Rome.

These new discoveries soon became accessible to many through the medium of a series of plates. One thing, however, Herculaneum could not offer—a complete picture of an ancient city. The covering of ashes, hardened to stone, had become too compact, and only permitted examination of single portions of the ancient city, and the bringing forth of its treasures to the light of day as from a mine.

Winckelmann was able to go a step beyond Naples southward to Pæstum and its ancient temples. Although visible to all eyes, they had only recently been discovered. He found himself here, for the first and only time in his life, on Greek soil, and saw Greek architecture. With his clear vision and warm sensibility, he conceived at once the radical difference between Greek and Roman architecture, and what he perceived here in one province of Greek art enlightened him in others. For the first time the grave creations of earlier Greek art,

great in their simplicity, entered the realm of historical æsthetics.

In Goethe's "Italian Journey" we recognize the same overwhelming impression on his visit to Pæstum, of another, until then, only dimly conceived world. Above all, in Sicily, which Winckelmann never visited, Goethe felt strongly the Greek, even Homeric, influence of his surroundings.

The Greek world of art was then already beginning to reveal itself. About the middle of the century Asia Minor and Greece entered the horizon of cultivated people. In both cases the search had been instituted by Englishmen. In the time of Charles I, Lord Arundel had fixed his gaze on Greece, and kept resourceful agents busy acquiring Greek sculpture for his collection. This unfortunately experienced many vicissitudes, until finally the greater part of it found its way to Oxford. A century later, in 1733, some learned men in London founded the "Society of Dilettanti," at first merely to unite travellers for the discussion of their recollections of Italy and the other countries of the "grand tour"; soon, however, to lend aid to serious undertakings. To the Society of Dilettanti belonged nearly all the collectors, who had of late been purchasing antiquities in Rome to embellish their country houses.

James Dawkins and Robert Wood, both members of the Society of Dilettanti, made known about the middle of the century the great ruins of Palmyra and Baalbec—those great Oriental-Roman creations of the second and third centuries A.D., and made them accessible to the art-loving and learned world.

More important still about this time were the results of an expedition undertaken in England to rediscover Athens. Athens had been practically lost during the Middle Ages. In the year 1674 occurred the visit of the French ambassador to Turkey, the Marquis de Nointel,

to whom we owe the so-called Carrey drawings; and in 1676 took place the voyage of the Lyons physician, Jacques Spon and his friend George Wheler, fortunately in time to rescue most valuable records, which otherwise would have perished in the unfortunate bombardment of the Acropolis by the army of Morosini in 1687.

Again Athens vanished into darkness, until in 1751 the painter James Stuart and the architect Nicolas Revett arrived there, and remained three years, taking careful measurements and drawings of the sculpture and architecture, which till then had never been accurately examined. Many things remained in those days which have since disappeared (as the Ionic Temple by the Ilissos, the Monument of Thrasyllos by the Acropolis, etc.); others were in a far better state of preservation than to-day. The Athenian enterprise of Stuart and Revett was the most eventful and important of all expeditions so far undertaken, and would have been of far greater significance had not the publication of their great work, the "Antiquities of Athens," been so excessively long delayed. Of the two volumes dealing with Athens, the first appeared in 1790, and the second not till 1816. It was not surprising that the Dilettanti, who had subsidized the publication, became impatient, and in 1764 sent out the "Ionic" expedition at their own expense. Besides Revett, the scholar Richard Chandler and the excellent draughtsman William Pars were added to its number. We owe to them, besides supplementary notes on Athens, the first survey of the remains of temples on the Ionic coast of Asia Minor (Samos, Priene, Miletos) considerably extending our knowledge of Ionic architecture. The Doric ruins of the temples of Ægina and Sunium became likewise known. Thus the "Antiquities of Ionia" supplemented the older publication in a most desirable manner, their volumes appearing in comparatively quick succession

(1769 and 1797), and almost eclipsed all interest in the former.

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Winckelmann, who passed away early in life, was not permitted to see the promised land of Greek art as revealed here by English energy. But his authority was so compelling that the following generation preferred to remain with him, rather than advance with the newly acquired knowledge. Winckelmann's "History of Art" remained for a long time the canon for all knowledge and criticism of Greek Art, although it was quite evident that it had originated on Italian soil, and betrayed certain limitations due to the almost exclusive use of Roman material. But how many, at that time, were there whose glance reached beyond? Again the power of the Roman spirit prevailed completely when the Vatican Museum was formed by the two popes Clement XIV and Pius VI. The Pioclementi Museum was a splendid enlargement of the old court of the Belvedere. The best that could be acquired by purchase, gift, or excavation, in Rome and the surrounding country, was gathered in these famous galleries, their buildings keeping pace with their ever-increasing wealth.

The Museum, begun in 1770, was completed in 1792, when its first catalogue was published. The most eminent Italian archæologist—Ennio Quirino Visconti—issued this superb volume, produced by papal munificence. It practically occupied the same position in regard to antique sculpture as Winckelmann's life-work in the history of art. The Vatican Museum seemed destined to furnish a brilliant close to the archæology founded on Italian sources. This position it still maintains to-day, and if the general public looks upon it as the noblest of all museums of antiquities, it only proves the quiet tenacity with which the tradition of Winckelmann continues to exist.

II

THE NAPOLEONIC PERIOD

THE man who impressed his great personality upon the decades at the end of the eighteenth and the beginning of the nineteenth century greatly influenced archæology, so that we may speak of that period as the Napoleonic. This influence was directed into three distinct channels: the scientific opening of Egypt, the excavations of Pompeii, and the foundation of the Musée Napoléon.

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Egypt had in former times only rarely been visited by travellers; of whom Richard Pococke, 1737–8, may be mentioned as one of the most distinguished.

Of Egyptian art only some single statues were known, which had mainly been recovered in Rome and found shelter in the Capitol; the splendid lions, which older visitors to Rome may still remember adorning the steps of the Capitol, some Ptolemies, and a statue of the mother of Rameses II, the latter indeed of the brilliant period of the New Kingdom. To these may be added some reliefs, numerous scarabæi, finally some obelisks with hieroglyphics. This formed nearly all the material on which Winckelmann was able to base his appreciation of the art of the Egyptians. Georg Zoega soon after devoted serious attention to the obelisks. He was the profoundest archæologist of the generation following

Winckelmann, and, like him, a son of the North, who had drifted to Rome. For the first time an accurate reproduction of hieroglyphics was offered in his erudite book, so that it was possible to recognize broadly differences of date, and thereby Zoega was able to demonstrate that hieroglyphics had not ceased with the Persian conquest of Egypt, as had heretofore been believed. Zoega further made a distinction between pictorial and phonetic symbols, and established therein one of the chief peculiarities of Egyptian writing. Finally he confirmed Barthélemy's observation that the so-called cartouches—a kind of linear frame of oblong form—contained the names of kings, the well-known starting-point for Champollion in deciphering hieroglyphics. In consequence of this and Zoega's investigation of Coptic—the latest development of the old Egyptian language—Egyptology had advanced as far as possible without a more extended knowledge of the monuments themselves.

Zoega's work appeared in 1797, about the time that Bonaparte—then twenty-eight years of age—after his successful campaign in Italy, concluded the Peace of Campo Formio. He thereupon began in secrecy preparations for his campaign in Egypt, aimed at England's Indian possessions. Men of science were added by the young general to this expedition, to investigate the enchanted world of the Nile, its life, nature, and art, in all directions.

For the first time since the days of Alexander the Great a campaign became at the same time an expedition for scientific purposes. Bonaparte departed from Toulon 19 May, 1798. Desaix, who was not much his senior, joined him, coming from Civitavecchia. In spite of the pursuit of the English fleet, they succeeded in landing at Alexandria on 1 July, and the army advanced rapidly along the edge of the desert to Gizeh, where, on 21 July, under Bonaparte's leadership, the great victory was

gained at the foot of the Pyramids over the Mamelukes. The army entered Cairo the following day, and ten days later, in consequence of Nelson's destruction of the French fleet at Aboukir (1 August), found itself completely cut off from home. Notwithstanding all this, the Egyptian Institute was founded in Cairo, to undertake the scientific investigation of the country. Among its most distinguished members may be counted Dolomieu, the mineralogist, and Denon.

Dominique Vivant Denon was at that time fifty-one years of age, and, although considerably older than the two leaders of the campaign, he equalled them in activity and energy. He was not a scholar, but an artist. A life of varied experience had led him, partly in a diplomatic capacity, to Frederick the Great, to Voltaire at Ferney, to Catherine II, and to the Court of Naples; the former favourite of Madame Pompadour later entered into relations with Robespierre, and finally with Bonaparte's wife Josephine. He was just the man to pursue artistic investigations in the train of the army. Hardly had he arrived in Cairo when he felt irresistibly drawn to the Pyramids. He spent the night at Gizeh, and the following morning he hurried to the Pyramid of Cheops, and penetrated to its interior. The great Sphinx near by stimulated him at once to considerations of style. As an experienced draughtsman he recorded all his impressions rapidly on paper, here, as throughout the expedition. Denon, whom Bonaparte had assigned to the army of Desaix, found in him a lively appreciation of art. Desaix had been commissioned to pursue Murad Bey and his troops up the Nile. The description of Denon's journey affords us an admirable picture of this adventurous expedition. Denon, always on horseback, proved an indefatigable draughtsman. At times he is interrupted by skirmishes with the Mamelukes; at times studying the old ruins, again his pencil is fascinated by

the magic of the landscape or the strange scenes of daily life; then again he is absorbed in the study of hieroglyphics.

The Pyramid of Sakkara offered something quite novel with its ascending steps. At Dendera, a longer stay made it possible to study there the extensive remains of the late period. The small temple of Hathor, in good condition, but half buried; the larger temple, not so well preserved, but rich in decorations; the famous representations of the Zodiac—all these marvels were now revealed to the artistic eye of Denon. The extensive ruins of Thebes could only be inspected hastily, as the stay there was disturbed by serious fighting, but Denon's attention had been attracted by the remains of the colossus of Rameses, three metres high. The temple of Horos at Edfu offered the first glimpse of a complete sanctuary, though again only of the times of the Ptolemies.

Thus the expedition continued up the river as far as Assuan (Syene) and the first cataract. At Elephantine there still remained the charming sanctuary, surrounded by columns, of Amenhotep III, and as it was destroyed in 1822, we owe our knowledge of it exclusively to the French expedition. The island of Philæ, in consequence of its situation and its ruins, offered a brilliant ending to the expedition. The farthest point reached is recorded here, in an inscription dated 3 March, 1799, thus immortalizing this event. The return journey down the Nile was now undertaken, but frequently interrupted by skirmishes. Only at Thebes, the hundred-gated, was a more prolonged stay made, and the widely scattered remains of the old capital could be studied more closely. The colossi of Memnon, already famous in antiquity, formed the chief object of interest, and Denon thought he recognized therein the images of Egyptian princesses.

Thus passed the first scientific expedition into the inner realm of the Pharaohs. At Cairo the Institute

displayed, for many years, striking activity, shared alike by scholars, officers, and engineers, gathering valuable material. Antiquities which could be secured without great difficulties were brought together there. Excavations were not undertaken, but observation and the zeal for collecting was perforce confined to gathering objects which lay exposed or came to light by accident, such as the Rosetta stone, discovered during the building of fortifications. Its inscription rendering the same text in hieroglyphics, Demotic, and Greek, materially aided in the deciphering of Egyptian monuments. In other respects the collection of antiquities consisted of twenty-seven works of sculpture, chiefly fragments of statues, but including some sarcophagi. The fate of this collection was strange.

After Bonaparte had returned to France in October, 1799, and his successor Kléber had been assassinated, 14 June, 1800, the French found themselves compelled to evacuate Egypt in 1801. The surrender of all these works of art to England was the condition of peace most unwillingly complied with. They found their way to the British Museum, instead of to Paris. But the results of their scientific investigations remained to the French. An editorial staff in Paris was busily engaged for years in compiling and publishing the numerous volumes of the "*Description de l'Egypte*," which constituted for many years the main source of our knowledge of the land of the Nile. The volumes dedicated to antiquity for the first time took into consideration the architecture of Egypt in its grandeur and simplicity, which till then had been unknown. Sculpture and painting appeared as supplementary arts in the service of architecture. Egyptian art had not yet been divided into different periods, and the illustrations given here belonged almost exclusively to the late ages. Denon had, however, correctly distinguished three different kinds of hieroglyphics (sunk, slightly

raised, *en creux*), though chronologically not correctly arranged. The contemplation of Egyptian art amid Egyptian surroundings and nature formed the main result obtained by the three years' expedition. A truly historical interpretation was reserved for later times.

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With the excavation of Pompeii the Napoleonic period won for itself another great distinction. But here it was not Napoleon who took the initiative, but other members of his family, his favourite sister in particular, the beautiful, clever, and ambitious Caroline.

The excavation of Herculaneum (p. 8) had been abandoned in 1766 in consequence of the insurmountable difficulties offered by the thick layer of hardened ashes and pumice stones. Pompeii now took the place of Herculaneum, as in 1748 its ruins had been accidentally discovered. The deposit over Pompeii, as is well known, is far less difficult to deal with. At first these attempts were only intermittent trials, in the south-east near the amphitheatre, and in the north-west in the remains of a villa, which was, of course, at once declared to be the villa of Cicero, as from one of his letters it was known that he possessed a country seat there. Only after Herculaneum had been definitely abandoned, in the early sixties, was work continued there more seriously. In the south-western part of the city excavations were begun in the quarter of the theatres; the two theatres and the three-cornered Forum, with its remains of early temples, the sanctuaries of Isis and the supposed temple of Æsculapius (Zeus Milichios). Besides these, a second large villa appeared adjoining the villa of Cicero, which received the name of Arrius Diomedes, the model of a town villa or summer residence. Thus this work continued slowly and deliberately for thirty years—four, eight, or at most thirty workmen being employed. When

the Emperor Joseph II visited the excavations in 1769 he expressed himself frankly in regard to the Neapolitan indolence, without, however, producing any effect. Besides, the evil custom prevailed of burying houses again after they had been robbed of their spoil. But even after this ceased, the excavations still continued to bear the stamp of careless working. Indifference prevailed as to architecture and as to the remains as a whole; only what could be carried off and placed in the museum excited interest. In this manner paintings were sawn out, bronzes and implements carried off, the bare walls and their decorations left to decay. Finally during the last decade of the century political events stopped all work.

Thus matters stood in Pompeii when towards the end of 1798 the King of Naples transferred his residence to Palermo, and the Parthenopean republic was founded in Naples under the guidance of the French General Championnet. He was personally interested in the excavation of Pompeii; some houses excavated at that time still bear his name to-day. They are toward the south near the theatres, and with several storeys tower above the steep south slope of Pompeii. The return of the Bourbons caused a short interruption, but in 1806 Napoleon made his eldest brother, Joseph, the most insignificant and indifferent of the brothers, King of Naples. The king had no scientific interests, but his minister, Miot, was more active. He induced the able Neapolitan scholar, Michele Arditi, to form new plans for the excavations. According to these the State was to acquire the entire site of Pompeii, and the excavations were to be carried on according to well-conceived plans, beginning at two points in the north-west, not as heretofore to be made in a haphazard fashion by working here and there. Finally greater sums of money were to be available, 500 ducats a month (£900 a year), so as to make it possible

to employ a larger force of 150 workmen. With this plan a firm foundation was laid for the work.

When in 1808 Joseph Bonaparte was transferred to the throne of Spain, and succeeded by his brother-in-law, Joachim Murat, as King of Naples, these plans received a great impetus. The wife of the latter, Queen Caroline, exhibited a keen interest in the Pompeian excavations, and proved this by appearing frequently at Pompeii, and stimulating the workmen to greater efforts. She frequently spent entire days, during the great heat, at the excavations, to encourage lazy workmen, and to reward them in the event of success. The funds were increased, so as to make the employment of six hundred men possible. The Street of Tombs was next uncovered, forming a complete and solemn picture, greatly impressing the beholder even to-day. For the first time a complete outline of an ancient market-place and its surroundings could be obtained; the market, enclosed and inaccessible to wheeled traffic, was surrounded by a colonnade, filled with monuments, with the great temple in the background, and beyond the arcades were other temples or public buildings; among the principal being the stately Basilica. Constant and increased efforts were thus crowned by important results. The Queen did not withhold generous assistance; the French architect, Fr. Mazois, received from her 1500 francs while preparing his monumental work on Pompeii. Even in those days careful preparations were made in advance for the visits of distinguished guests. While the Congress of Vienna was in session in the autumn of 1814, the Queen had been expected to appear, although in vain. In April, 1815, Prince Achilles came with the King of Westphalia, who had in the meanwhile lost his kingdom; and in June King Ferdinand again entered Naples.

The Bourbon regime continued the work, and its most important achievement was the connection of the two

different points of the excavations at the Street of Tombs and the Forum. The climax of these efforts was formed by the temple of Fortuna Augusta, and the baths near the Forum—illustrating graphically the baths of antiquity. But the old Neapolitan indolence soon returned, and Pompeii sank once more into a long sleep. What had been gained during the time of the French remained always of importance; an insight into a Roman provincial town showing different centres of traffic, and exhibiting elegance in her wealth and artistic surroundings. Herculaneum may, on the whole, have been wealthier and more refined in the arts, but Pompeii first enabled us to construct a picture of an entire city. This appeared at first as a uniform and complete whole, and it was not realized at once that what had been termed Pompeian chiefly belonged to the later and decadent period of Pompeii. This historical point of view only prevailed later; in the meantime, the beautiful works of Mazois, Gau, Zahn, Ternite, as well as the more popular ones of William Gell and others, fully prepared the public for Bulwer's novel, "The Last Days of Pompeii," in 1834.

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In the establishment of the great museum in Paris Napoleon took a more personal part, its origin dating even further back than the Egyptian campaign.

As far back as the Renaissance the French capita and its neighbourhood had made use of antiques for decorative purposes. To mention only the foremost o these: Francis I possessed, besides bronze copies of antiques, the "Diana with the Hind," for which Henry IV formed in the Louvre the "Salle des Antiques." Louis XIV acquired the "Germanicus" and the "Jason" from the Villa Montalto (p. 5). But these antiques were scattered to adorn the royal palaces of Fontainebleau, St. Cloud, and Versailles; and the palaces of the Louvre and the

Tuileries had their share. With these competed the Palais Cardinal (Richelieu) in Paris and the Château d'Ecouen of the Montmorency family. This collection of sculpture was, however, greatly overshadowed by the "Cabinet des Médailles" in Paris with its coins, gems, and bronzes, a collection of the first importance.

It is to the credit of Napoleon that he created a new art centre in Paris for antique sculpture. In supplementing his Egyptian campaign with scientific work he followed the admirable example of Alexander the Great; now in acquiring antiquities he followed the less praiseworthy custom of Roman generals, who pillaged conquered countries and transferred the captured treasures to Rome. The youthful conqueror of 1796 must certainly have had this example in his mind while making the conditions of the truce at Bologna, 23 June, for Article VIII reads as follows: "Le Pape livrera à la République Française cent tableaux, bustes, vases ou statues, au choix des commissaires qui seront envoyés à Rome, parmi lesquels objets seront notamment compris le buste en bronze de Junius Brutus et celui en marbre de Marcus Brutus, tous les deux placés au Capitole, et cinq cents manuscrits au choix desdits commissaires." Characteristic of the republican is the prominence given to the busts of the expeller of kings and the murderer of Cæsar. In vain the pope resisted; this severe condition was recorded in the Treaty of Tolentino in February, 1797. The antiques selected were the choicest of those contained in the Belvedere of the Vatican and in the Hall of the Muses; the Capitol suffered the loss of about a dozen of its finest statues, among them the "Dying Gladiator" and the "Thorn Extractor." But even this did not suffice; under threadbare pretexts private collections became involved, especially that of the Duke of Braschi, a relative of the pope, and the rich villa of Cardinal Albani (p. 7). The entire collections of antiquities were confiscated; 517

pieces packed into 288 cases awaited on the shores of the Tiber transportation to Paris. In consequence of negotiations, however, only 70 antiques shared this fate. Those selected were, of course, not the least valuable.

In November, 1801—the 18th of Brumaire of the IXth year—just two years after the *coup d'état*, the Musée Central in the Louvre was opened with 117 objects. Two years previously Visconti, who in the meantime had been one of the consuls of the Roman republic, had removed to Paris, and devoted during the two following decades his brilliant scientific attainments to the museum there and to French archæology. He also drew up the catalogues of the rapidly growing museum. But the actual guiding spirit, here as well as in Egypt, was Denon. He accompanied the army, and decided on the works of art to be carried off. Florence had to yield her Venus de Medici, Venice the four bronze horses on St. Mark's, Mantua the famous busts of Euripides and of "Vergil," Verona the Augustus Bevilacqua, Modena and Turin minor works. At the Louvre one gallery of antiques after another was opened, just as the Belvedere had expanded into the Museum Pioclementi. The entire Borghese collection, which Napoleon had bought of his brother-in-law, Prince Camillo Borghese, was incorporated in 1806. Very soon German antiquities were added, in all twenty or thirty objects; the "Praying Boy" in Berlin led the way for the "Victory of the Brandenburg Gate," an Athene from Cassel, the alleged sarcophagus of Charlemagne from the Cathedral of Aix-la-Chapelle, and others. In Vienna Denon selected, in 1809, twenty-four objects from the collection of antiquities, among which the only valuable one was the alleged Amazon sarcophagus of Ephesos. The precious cameos of the Imperial House had fortunately been carried in time into security in Hungary. Numerous catalogues recorded the constantly growing acquisitions of the museum and the addition of

new buildings. In the year 1815 its numbers reached 384. Free admission granted to the public, the establishment of a foundry for reproduction of the sculpture at the museum, the preparation and publication of great collections of engravings, all contributed to increase the magnificence and usefulness of the Musée Napoléon, and to drown the voices of those who took exception to the manner in which most of the treasures had been gathered. How incensed the educated public would have been if, in the conditions of the Peace of Frankfort in 1871, a demand had been made for the Venus of Melos and some of the more important paintings in the Salon Carré!

The department of antiquities in the Musée Napoléon bore an entirely Roman character. With the exception of the Ludovisi collection, the different Roman collections had yielded their best, but the effect produced in Rome by numberless works of art offered for contemplation, amid ancient surroundings, could not be attained elsewhere. If the unique treasures of Naples could have been acquired the museum would have gained, in regard to bronzes and paintings, a great advantage over Rome. Notwithstanding this, the classical period of Greek art was represented by many copies of different degrees of excellence, the Hellenistic period, and to some extent Roman art, by such excellent originals, that we can understand Visconti's point of view, when he states that antique art retained the same high level from the time of Phidias to that of Hadrian. It was the first attempt to replace the æsthetic theory of Winckelmann and of his followers by another.

To grasp the historical impossibility of this, one need only reflect a moment. Six centuries filled with migrations of races, of constant changes in political and civilizing influences, but art retaining always the same height, as if floating above the clouds! The great name of Visconti produced this illusion. The Musée Napoléon became the

training school for the archæologists of those days, for them Napoleon's Court archæologist, Visconti, was the oracle. Friedrich Thiersch, who was then studying the antiquities in Paris, became for Germany the apostle of this unhistorical theory.

With the downfall of Napoleon in 1815 his brilliant creation fell. It was only just, that what had been acquired by martial law should now be returned to their original owners by martial law. The Secretary of State, Cardinal Consalvi, maintained the claims of Rome; Wilhelm von Humboldt and the Duke of Wellington endeavoured successfully to break the resistance of the French commission, especially of Denon. The Vatican received its property almost intact; although it showed a petty spirit that the Tiber statue had to see his old comrade the Nile return alone to the shores of the Tiber. The expenses of the return journey were so enormous that the papal authorities were only able to meet them with substantial aid from England. For the same reason the heirs of Cardinal Albani contented themselves with bringing back only four of the seventy objects carried off, the others were sold at auction in Paris, and were either returned to the Louvre, or went to the Glyptothek in Munich. In the Capitoline Museum a special gallery was opened for the restored marbles, where they were grouped around the "Dying Gladiator." Only the Borghese collection was acquired by purchase and remained in Paris, forming the nucleus of the present Musée Royal. Visconti published, in 1817, its first catalogue and his last work; he died the following year.

The Musée Napoléon was the last magnificent example of a museum exhibiting a Roman character. It marked the end of the old system of conducting museums. The Napoleonic empire had represented itself as the heir of the Roman Cæsars. Philology and Ancient History had also for centuries cultivated, in a one-sided manner, Rome

and Roman literature. But at this moment the History of Rome was receiving a magnificent revival at the hands of Barthold Georg Niebuhr. On the horizon, however, the splendour of another dawn was visible. Simultaneously with the Roman Musée Napoléon the British Museum in London was developing as the most illustrious centre of Greek art.

III

HELLAS REGAINED

IT naturally follows from their old affinity of race and their mental characteristics that the Italians and French would feel more drawn toward Roman antiquity and its expression in art than toward the Greek. For a long time Greek literature had only been accessible to these nations from Roman translations or adaptations, and the language of the Church fostered the Latin language as well, while the German schools and universities, partly under the influence of Protestant theology, adhered to the study of Greek. Thus it came about that when at the end of the eighteenth century the intellectual magnetic needle pointed more and more toward Greece, as the central land of antiquity, Germany took the foremost place in the reorganization of archæology, in the Greek humanistic spirit.

The leaders in Germany were Friedrich August Wolf, August Böckh, Gottfried Hermann, and Immanuel Bekker; in England appeared at the same time Richard Porson and Peter Paul Dobree, while in France Jean François Boissonade and a Greek residing there, Adamantios Koraës, distinguished themselves. As in Germany, so in England, Greek formed part of the general education, and was partly the cause which now led many British travellers to Greece instead of Italy; soon, however, political difficulties experienced by British travellers in the Italy of the French increased this tendency. At the

end of the eighteenth century, among travellers and collectors may be mentioned Richard Worsley and Edward Daniel Clarke. The time in England was noted in archæological literature by the appearance of the second volume of "The Antiquities of Athens" (1790), dealing with Athens and the Acropolis; of the "Museum Worsleianum" (1794) and the last volume of the "Antiquities of Ionia" (1797).

Stimulated by these new studies, an enterprise was set on foot at the beginning of the century which was to prove of the utmost importance. Lord Elgin, then hardly thirty-three years of age, a member of an old Scottish family, was in 1799 sent as British ambassador to Constantinople. His friend, the architect Thomas Harrison, aroused by the study of the above-mentioned books, had requested him to send plaster casts of certain sculptures and of an Ionic corner capital, known to be of irregular form. This modest request fell on fruitful soil, and the young earl conceived the plan of rendering to British art the most far-reaching services, by having drawings and casts made. The request to Pitt for Government aid failed, a fact which can easily be understood if the warlike condition of affairs is realized. Lord Elgin was thus thrown entirely upon his own resources. W. R. Hamilton, his extremely active secretary, who later became President of the Geographical Society, succeeded in gathering in Italy a complete staff of artists: the painter Tita Lusieri, the draughtsman Fedor, a Calmuck, the architects Balestra and Ittar, and two workers in plaster. While the ambassador proceeded directly to Constantinople, these artists went to Athens, arriving in May, 1800, but were prevented from working by difficulties raised by the local authorities. On the Acropolis they were merely allowed to draw, and this only after paying daily £5 for admission; the citadel still remained a fortress. The artists thus

lost quite nine months. Ultimately the death of Kléber occurred, which made England's negotiations in Egypt and the withdrawal of the French possible (p. 17), in consequence of which, the British ambassador to Turkey gained greater influence.

Lord Elgin, in May, 1801, made use of the favourable condition of affairs to secure for his artists free access to the Acropolis and permission to erect scaffoldings and take casts there. But the extortions of the greedy Turks did not by any means cease. Lord Elgin convinced himself of all this by visiting Athens, and, while impressed with the great beauty of the monuments, recognized at once the danger to which they were constantly exposed by wilful destruction and by being scattered and recklessly bestowed on strangers. Lord Elgin bought and demolished two houses near the Parthenon ; in the first was found a rich harvest of the pediment statues ; in the second, however, there was nothing ; all had already been consigned to the limekiln.

This experience and similar observations of Philip Hunt, the chaplain of the Embassy, who spent far more time in Athens than in Constantinople, induced Lord Elgin to secure a new firman permitting his artists not only to put up scaffoldings and take casts, but also to take measurements and to search for the foundations of buildings and for inscriptions ; besides this "no one should interfere in case they wished to remove some stones having inscriptions or figures upon them."

This last statement gave the undertaking quite a new direction. Hunt knew how to interpret these words in the proper manner. By means of bakshish in the form of English goods, he received permission from the governor to remove one of the metopes of the Parthenon. This permission had been granted more than ten years before to the French ambassador, Count Choiseul-Gouffier, in reference to the removal of a slab of the frieze.

Lord Elgin's first success induced him to have his firman extended, so as to gain permission to remove other sculptures of the temple. This formed the beginning of the widely discussed operations in the citadel, where 300 to 400 workmen were kept busy for a year carrying off the decorative sculpture of the Parthenon. This spoil consisted of a dozen figures of the pediments, fifteen metopes and fifty-six slabs of the frieze. The latter were chiefly collected from the ground around the temple or found among the houses ; the statues of the pediments were removed without necessarily injuring the architecture ; the metopes, however, could only be detached after destroying the cornice above them—a proceeding deserving the severest censure. It was impossible to remove without vandalism a column from the eastern porch of the Erechtheion and a maiden from the Caryatid porch, which was replaced by a clumsy pillar. As it was said, "*Quod non fecerunt Gothi, fecerunt Scoti.*" On the other hand, parts of the frieze from the Temple of Nike and some single sculpture from the lower city of Athens were practically saved by their removal from destruction or loss. The exploitation was completed by a number of plaster casts from the Theseion, and a rich collection of drawings.

All this had been accomplished when Lord Elgin was recalled in 1803 and returned home via Athens. Lusieri, who remained as his agent, was soon enabled to send off this precious load, in 200 cases, filling several ships. The brig *Mentor* was wrecked off stormy Cape Malea, but skilled divers from the islands off the coast of Asia Minor succeeded in recovering, in the course of three years, all the treasures. What remained in the care of Lusieri was seized by the French, when in 1807 Turkey declared war on England, and taken by them to the Piræus. The want of opportunity for shipment, England's command of the sea, and the speedy declaration of peace saved the

statues from the fate, which had befallen the French treasures in Egypt, of falling into the enemy's hands (p. 17). Not till 1812 was Lusieri able to dispatch the last eighty cases to England.

Against the questions whether Lord Elgin was justified in using his official position to further a private enterprise, whether Hunt's interpretation of the firman was correct, and whether the workmen always exercised the greatest care and skill, we may set the consideration that these precious sculptures were spared from damage and destruction, and withdrawn from the injuries inflicted on the Acropolis, and in particular on the western front of the Parthenon by two bombardments about twenty years later. We can only ask here whether, in consequence of Lord Elgin's action, science has been promoted or retarded, and the answer cannot be doubtful. Only since these valuable remains have been secured from the indifference and covetousness of the Turks, placed in safety and exhibited in an easily accessible spot, have these masterpieces of the school of Phidias gained an influence over the development of archæology, and established a fixed standard or scale for the contemplation of the history of Greek art which they would never have exercised in the then remote Athens, in the enclosure of a Turkish fortress, at the inaccessible height of the pediments, or scattered and hidden in many secret places. The history of Greek art would for another half-century or longer have lacked the important stimulus given by the Elgin marbles in London. Science therefore has every reason to feel grateful to Lord Elgin.

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Work continued at Athens, for, as Lord Arundel (p. 10) had expressed it, " to transplant old Greece to England " seemed now the desire of many. While the architect,

William Wilkins, was studying Athenian architecture, a number of travellers were preparing to study the country of Greece scientifically. The chief among these was Captain William Martin Leake, as he then was. He was present at the shipwreck of the *Mentor* (p. 30), and lost on that occasion all his papers, which contained a detailed description of his travels in Asia Minor. He again returned to Athens in 1804, to travel on the Greek mainland, in the employ of the British Government. He thus became the founder of the scientific geography of Greece. Simultaneously there travelled in Greece the loquacious Edward Daniel Clarke, the thoughtful antiquary Edward Dodwell, accompanied by the Italian draughtsman Pomardi, and the dry but indefatigable William Gell. Their guide was Pausanias, the describer of Greece in the age of the Antonines, as he had been in earlier days for Spon and Chandler. But the eyes of the present travellers were more free and open to appreciate present conditions as well as the remains of the past which were unfolded before them in surprising number and diversity. The remains of prehistoric architecture in the Argolid impressed them most forcibly. Tiryns was discovered with its cyclopean walls of huge blocks, one towering above another, with subterranean galleries and arched vaults, as yet of enigmatical character. Mycenæ, the citadel of the Atreidæ, appeared, with the Lion Gate and the famous Beehive Tomb or Treasury of Atreus, in which experimental excavations had been made by Lord Elgin's representative. These travellers had no thought of carrying on excavations. Thus there appeared from the darkness of antiquity the first palpable remains of the sites hallowed by Homeric poetry and primeval legends. From the very ancient walls of Mycenæ and Tiryns interest was naturally extended to the numberless, and at times excellently preserved, city walls of later times, scattered all over Greece. To these may be added

the beautiful ruins of Corinth, Ægina, Bassæ, near Phigalia, until then hardly investigated. These remains of consummate architecture induced the Society of Dilettanti to organize in 1812 and 1813 a new expedition to Asia Minor and Attica, about the time of Napoleon's campaign to Russia, with Gell as its chief, accompanied by the architects John P. Gandy and Francis Bedford. Their "Unedited Antiquities of Attica" appeared in 1817, soon after the publication of the second volume of "Antiquities of Athens," in which the sanctuaries of the Eleusinian Mysteries and the group of Temples at Rhamnus mark a great advance in our knowledge of Greek architecture.

Other British architects were working at Athens along the same lines. C. R. Cockerell and J. Foster met Lord Byron there in 1810. Technical questions were of absorbing interest, in view of the unparalleled technical perfection found in all the details of the buildings on the Acropolis. Thus Cockerell began measuring the Doric column to ascertain its exact entasis, which had already been observed by Wilkins. This entasis is a slight expansion of the outlines, which in the columns of the Parthenon, having a diameter in the lowest drum of 1·90 metre, amounts only to 17 millimetres on each side, and is of vast importance in giving life to the outline. In September, 1810, these two young men, who were still in the early twenties, were joined by a group of older men, who had met in Rome, and there decided to come to Greece. These were two Danish scholars, Peter Oluf Brönstedt and his brother-in-law Koes, the Livonian Baron Otto Magnus von Stackelberg, an antiquary, and a man of fine artistic taste; the Nuremberg architect Baron Haller von Hallerstein, and the Suabian amateur Linkh, of Canstatt. These men were soon united in close bonds of friendship, which developed into a special intimacy between the two architects, Haller and Cockerell.

All had the same ambitions, but tried to realize them in diverse ways. Stackelberg and the two Danish scholars visited Asia Minor, while the two Germans and the two Englishmen went to Ægina in April, 1811, to examine the ruins of the supposed Temple of Zeus. Having established their quarters in a cave near the ruins, they found a head with a helmet, near one of the pediments, while taking measurements and decided to pursue these traces. Thirty workmen were then engaged, and a great number of fragments were found during sixteen days' labour. From these fragments it was possible to restore later fifteen statues, five of the eastern and ten of the western pediments. The fortunate discoverers acquired the entire treasure from the city of Ægina for the sum of £30 to £40. The inhabitants of Ægina evidently rated the marble fragments only according to their value for the limekiln. These valuable fragments were conveyed to Athens *en route* for Zante, at that time the trade centre in these regions, but soon they were removed to Malta, and placed under English protection, in consequence of the warlike condition of affairs there. Their public sale had previously been fixed in Zante for November, 1812. France and England tried to acquire them; the latter had given unlimited powers to its representative, who, however, made the mistake of going to Malta, while the sale was in Zante. In consequence the Crown Prince Louis of Bavaria was able to acquire them for the comparatively low price of £6000, and thereby to secure a firm foundation for the Glyptothek he had planned.

Thorvaldsen was chosen to restore and reconstruct these fragments. Although this restoration long enjoyed great fame, yet critical study and strict comparisons have revealed failures in a scheme carried on without scientific advice. The detailed description of the excavations recently undertaken by Furtwängler, and his reconstruction therefrom, will be considered in another chapter (VI).

When these discoveries were made they increased our knowledge in two directions. Firstly, it was shown that pediment groups, of which the only examples then known were those of the Parthenon, formed the decoration not exclusively of larger temples, as was then supposed, but that small temples possessed the same decorations at either end. The subject of the newly discovered group referred to Homeric poetry, to the battles before Troy.

Secondly, the composition of the group was of unexpected severity, in a style presenting older characteristics than the Attic, and distinctly different ones. It was Doric art appearing here for the first time. It seemed so entirely strange that the sculptor Martin Wagner, who had made the fortunate purchase for his prince, was reminded of Egyptian art. This suggestion has been repeatedly made since in regard to newly discovered archaic Greek art.

The travellers, the two Englishmen and the two Germans, were still followed by good fortune. From Ægina they crossed over to the Peloponnese. In the south-east corner of Arcadia they reached, in July, 1811, the temple of Apollo at Bassæ, near the town of Phigalia, which is spoken of among the natives as "near the columns" ('ς τοὺς στύλους). The temple is distinguished by its exceptionally fine position. It is situated high in a mountainous region, commanding an extended view toward the south over rich Messene, with Mount Ithome as a central point, and the sea far beyond. To this must be added the different peculiarities in the construction of the temple, the unusual ground-plan; the use made of Ionic half-columns in a Doric temple, etc. There was abundance of work for the architects Haller, Cockerell, and Foster.

While searching among a heap of blocks they came upon a fox's earth, and continuing their search they found a slab of a frieze, which had served as its lair. Yet another

Temple with sculpture! Excavations were not permitted, but after their success at Ægina these friends did not despair of attaining their aim. The Prussian painter Georg Gropius, who lived at Athens as the Austrian vice-consul, had joined this circle of friends, and began negotiations with the governor of the Morea, Veli Pasha, at Tripolitza. He succeeded in obtaining permission to excavate, by promising him half the treasure found.

With this message Gropius joined his friends at Andritzena in July, 1812. Cockerell was absent, as he had gone to Sicily, but instead Stackelberg had joined the three travellers, Haller, Foster, and Linkh. Thus a party of fourteen persons ascended these lofty summits, on which they pitched their tents and huts built of branches. The settlement was called the "Franks' Town" (*φραγκούπολις*). The number of workmen employed varied from 60 to 120. Haller took charge of the excavations, while Stackelberg acted as draughtsman. Great activity was developed on this elevated site, frequently interrupted by visitors, wandering musicians, or festivals; even acquaintance with robbers was not lacking.

The search for a pediment group proved vain, evidently the Temple had not possessed any. The reward of two months' labour consisted (besides some fragments of metopes) of thirty metres of frieze, out of which it was possible to reconstruct twenty-three slabs.

The difficulty now arose of settling with Veli Pasha. He had heard of the discovery of silver treasures. Some freshly broken, coarse-grained marble had given rise to this. Great was his disappointment when one of the slabs was sent to him for inspection. There was nothing for him to do but act the art-lover and admire the workmanship of the tortoises, for which he mistook the great round shields of the warriors. Under these circumstances

it was not difficult to buy from the pasha his share, and permission to transfer the marbles, for the moderate sum of £400, particularly as his recall was imminent.

The laborious task of removing these heavy blocks and countless fragments over mountains without roads to the sea, was accomplished in spite of great difficulties with the authorities, and they were transferred to Zante, like the Æginetan marbles. All had been placed on ship-board, except a very curious Corinthian capital, the only one in the temple, when the soldiers of the new pasha arrived to prevent the departure. In this, however, they did not succeed, but the travellers had to witness the wilful destruction of the capital by the Turks, and therefore it is only known to us from drawings. Martin Wagner saw the sculptures in Zante, while concluding the purchase of the Æginetan statues, and made drawings of them, which he published later to the great displeasure of their discoverers. Their sale took place in 1814. The British ambassador was present this time, and obtained the frieze for £15,000, almost three times the price paid for the Æginetan marbles.

Science was greatly enriched by the discovery of Bassæ. The complicated ground-plan of the temple, which had evidently been built in reference to an older sanctuary; the strange form of the Ionic columns to which the Corinthian capital had belonged, the oldest one known; the combination of the three styles of architecture in one temple, was so extraordinary as to excite the utmost curiosity, particularly as its builder, Iktinos, the Athenian, had laid down a canon for architecture in erecting the perfect building of the Parthenon. The frieze likewise presented great problems. It had been on the inner walls of the main apartment of the temple above the Ionic columns — how had it received its light? This question of the lighting of the temples, the nature of the so-called hypæthral temples, thus became one of the

questions of the day, not to disappear for many decades. All possible and impossible technical solutions were offered and eagerly discussed, until finally, thanks to a thorough investigation of Dörpfeld's (1891) the conviction now prevails that lighting an interior from a brilliant upper light was quite foreign to a Greek temple; there is no question at Bassæ of a covered apartment, but of an open court, such as has been proved to have existed in other temples, e.g. Didymaion near Miletos. But the frieze demanded an explanation as well. Its frequent Attic suggestions, and, on the other hand, a style inclining to greater severity, have not yet received a satisfactory explanation. Stackelberg, who devoted great care to the study of the frieze, and gradually published his studies, sought to discover its author in Alkamenes, the most talented of the pupils of Phidias. Very few have been able to accept therein a solution of the riddle.

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The finds of Ægina and Bassæ were happily placed in Munich and London, but what had in the meantime become of Lord Elgin's acquisitions?

Lord Elgin was recalled in 1803. On his return journey he stopped in Rome to submit drawings of his sculptures to Canova, and request him to undertake their restoration. But Canova gained a name for great penetration and insight by declining and declaring it "not permissible to restore works of such supreme importance."

With this declaration an entirely new standard was given to the art-criticism of the time, rather foreign to that then existing in Italy. The advice was too novel to be accepted everywhere at once, but posterity has justified it. Archæologists will, in consequence, forgive Canova many softening transformations of the antique spirit. Against all international law Lord

Elgin was taken prisoner by the French on his return voyage, and kept in prison for three years. He offered at once, while in prison, his collection to the British Government, but without avail. What indeed had become of these cases ? When Elgin returned home in 1806 he had to seek them in many ports to which the different ships had carried them, and with difficulty secured a shelter for them. Before the cases had even been opened, their unknown contents received the bitterest criticism from Richard Payne Knight, the then acknowledged art oracle of England. He declared the sculptures of the Parthenon to be the work of artisans, and partly of Roman times. The influence of the entire Society of Dilettanti supported Payne Knight. To counteract this spiteful stupidity Lord Elgin undertook to exhibit his treasures publicly.

Only a few grasped the significance of this revelation, and no one with deeper conviction or with greater enthusiasm than the young painter Benjamin Robert Haydon. How the contemplation of the Athenian marbles inspired him is best revealed in his autobiography. This occurred in 1808. The painter David Wilkie, Haydon's friend, had received a ticket of admission, and called to take him there.

" To Park Lane then we went, and after passing through the hall, and thence into an open yard, entered a damp, dirty pent-house, where lay the marbles ranged within sight and reach. The first thing I fixed my eyes on was the wrist of a figure in one of the female groups, in which were visible, though in a feminine form, the radius and ulna. I was astonished, for I had never seen them hinted at in a female wrist in the antique. I darted my eyes to the elbow, and saw the outer condyle visibly affecting the shape in nature. I saw that the arm was in repose and the soft parts in relaxation. That combination of nature and idea which I had felt was so much wanting for

high art was here displayed to midday conviction. My heart beat! If I had seen nothing else I had beheld sufficient to keep me to nature for the rest of my life. But when I turned to the *Theseus*, and saw that every form was altered by action or repose—when I saw that the two sides of his back varied, one side stretched from the shoulder blade being pulled forward, and the other side compressed from the shoulder blade being pushed close to the spine, for he rested on his elbow—and when, turning to the *Ilissos*, I saw the belly protruded from the figure lying on its side—and again when in the figure of the fighting metope I saw the muscle shown under the one armpit in that instantaneous action of darting out, and left out in the other armpit because not wanted—when I saw, in fact, the most heroic style of art combined with all the essential detail of actual life, the thing was done at once and for ever.

"I shall never forget the horses' heads—the feet in the metopes! I felt as if a divine truth had blazed inwardly upon my mind, and I knew that they would at last rouse the art of Europe from its slumbers in the darkness."

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Haydon spent three months drawing from the sculptures, and then expressed his opinion in these words:

"I saw that the essential was selected in them, and the superfluous rejected—that first, all the causes of action were known, and then all of those causes wanted for any particular action were selected—that thin skin covered the whole, and the effect of the action, relaxation, purpose or gravitation was shown on the skin. This appeared, as far as I could see *then*, to be the principle.

"I consider truly that it is the greatest blessing that ever happened to this country, their being brought here."

But others did not share these thoughts. Disapproval

"THESEUS," FROM EAST PEDIMENT OF PARTHENON

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continued in influential circles, and the Greek gods remained almost without recognition in the foggy city on the Thames. In spite of all this, Lord Elgin refused offers made to him, the first coming from the Musée Napoléon. In 1811 he began negotiations with the House of Commons, but they failed. A new opponent now arose, and one of the most dangerous. In the spring of 1811 appeared Lord Byron's "Curse of Minerva," a result of his stay in Athens. And in the summer of the following year, in "Childe Harold" he poured out the vials of his wrath on the Scot, the Pict, the temple-robber. All conspired against the Athenian strangers, who wandered from place to place begging for shelter. When, in 1814, the Frieze of Bassæ arrived in London, Payne Knight raised his voice anew in praise of these reliefs, in contrast to the sculptures of the Parthenon.

The true appreciation of the latter came first from foreigners—excepting Haydon and a few of his friends. The Crown Prince Louis of Bavaria came in the summer of 1814 to London, from the Peace Congress in Paris, and was so impressed with the beauty of the Athenian marbles, as to deposit a sum for their purchase with his bankers in case England should refuse to reconsider her decision. Visconti, the foremost archæologist of the time, soon followed. He was the first to devote serious study to this collection. His unqualified praise was extremely disconcerting to the opponents. Lord Elgin, who in the meantime had incurred financial difficulties, thought the moment opportune to offer his treasures for sale to the British nation, for whom he had originally acquired them.

Delays were caused, rather to Lord Elgin's advantage, by Napoleon's return from Elba, the Hundred Days, the battle of Waterloo, and the proroguing of Parliament. In the meantime not only had Visconti delivered two addresses before the Academy of Paris, which Lord Elgin had printed at once, but Canova appeared in London in

November, 1815—he had been engaged in Paris with the restitution of the stolen art treasures (p. 25). The unreserved recognition he accorded to the Athenian works of art finally silenced their opponents and enemies. The remarkable spectacle was now witnessed in February, 1816, of a Parliamentary commission sitting for a fortnight, as an Areopagus of art, calling witnesses and experts to judge the masterpieces of Phidias. Payne Knight still rated the statues of the pediment no higher than the frieze, while sculptors (e.g. Flaxman) and painters valued them above most, if not above all other, antique works. In consideration of Payne Knight and his distinguished patrons Haydon had not been called.

Finally, on June the 7th, 1816, the purchase of the entire collection for £35,000 was confirmed by a sparsely attended Parliament against a feeble protest of the Liberals (for this had also become a party question). Lord Elgin had renounced all definite demands. This sum, somewhat grudgingly conceded, hardly covered his bare expenses, and if the loss of interest is considered, he was hardly reimbursed for half his loss. Some apology was offered for the persecution to which he had been so long exposed by nominating him as Trustee of the British Museum. A still greater honour is the indissoluble union of his name with the "Elgin Marbles."

These treasures were acquired for the British Museum. This had grown since 1753 from very modest beginnings, but as a National Museum and not as a Crown Collection, like nearly all other great collections of antiques. Its gradual rise is marked by the following acquisitions: an important collection of painted Greek vases of Southern Italy formed by the British ambassador at Naples, William Hamilton (1772); the spoils of Egypt in 1801 (p. 17); the important Roman collection acquired from Charles Townley, 1805; and finally the Frieze of Bassæ purchased in 1814. The Museum rose now, at once, to

the rank of foremost importance with the acquisition of the Elgin Marbles. In consequence of the great value of these additions, it so far surpassed the Musée Napoléon, which was already being dispersed, and the Roman museums as to relieve it for ever of all fear of losing this position.

When finally these Athenian sculptures, freed from the "Curse of Minerva," took their permanent place in the National Museum, they soon became popular, the frieze in particular. The cows of the Athenian hecatomb excited the admiration of English cattle-breeders; a riding-master decided to bring his pupils, in preference to giving them a riding lesson, so that they might contemplate for an hour these riders, who sat in so masterly a manner on their bare-back horses.

Across the Channel also the fame of these treasures rapidly extended. Quatremère de Quincy came in 1818 from Paris, a highly esteemed veteran of archæology, who only quite recently had published his learned studies on Phidias and the chryselephantine art. In his letters to Canova, the most eloquent testimony of the incipient change of taste, with him as with Haydon, the conviction prevails, and is repeatedly expressed, of having received an entirely new revelation. He compares the statues to the most famous antiques, and always in favour of the former. But to him of greater importance still is the composition as a whole, a unique group of original works of the highest rank, revealing unity in rich variety. In some respects he absolutely agrees with Haydon. For he says: "The bodies show a thorough knowledge of the anatomy of the bones such as is nowhere else exhibited. Firm lightness and genuine strength are thus attained at the same time. These bodies can move, they seem to be moving." Moreover, the partly firm, partly soft flesh, the muscles, now strained, now relaxed, the elastic skin everywhere adapting itself to them, and that play of

countless delicate movements of the surface which, though inexpressible in words, appeals immediately to the senses, true to every detail and filled with life. "Never have I seen anything of its kind so much alive as the horse's head. It ceases to be sculpture; the mouth neighs, the marble lives, one thinks one sees it move. And the river-god, he looks as if he would rise, he is rising, and we are surprised that he is still lying there."

To Quatremère the drapery appears equally admirable. Nothing of that supposed stiffness or austere severity, but here again an inexhaustible wealth of imagination and spontaneous life. The folds cling lightly and delicately to the bodies, or blown by the wind float behind in mighty curves, or again they envelop the body in huge folds, forming an endless variety of single rich motives. "The charm of these draped figures is as that of the Graces. It is the despair of those who continually ask for its cause." "*E bella perchè è bella*" is the simple reason, and the expert will never know more than the layman.

Thus the great art critic was influenced by these originals. The sculptor Dannecker was only able to judge of them by casts sent by Haydon, and wrote as follows: "For me, it is the highest and greatest I have ever beheld in art. They are as if modelled on nature, and yet I have never had the good fortune to see such nature."

The Sage of Weimar had to content himself with drawings, but these influenced him so strongly that he expressed a desire to go to England instead of Italy (for "there alone were united law and gospel"). And he conceived a plan for a society of German sculptors, who were to make the British Museum their regular place for study. It was touching to hear an old man of seventy, in whose mental development Italy had always played so important a part, call himself "happy to have lived to see this."

FROM EAST PEDIMENT OF PARTHENON

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Taste became completely revolutionized. The land of the Greeks, which Winckelmann had sought in spirit, now lay open before the eyes of all who had eyes to see. Welcker wrote : " The history of art has a new focus, and has found for ever the correct standard of the main proportions." If the Elgin Marbles had remained in the Turkish fortress at Athens, would this conclusion have been reached so soon ? The Glyptothek in Munich, opened by King Louis in 1830, was the only museum to compare, even distantly, with the British Museum. For here also original works of Greek art gave distinction to the collection. But, inasmuch as the royal collection retained from the beginning the historical point of view which continued to influence the arrangements of the Glyptothek, in this respect the Munich collection emphasizes even in a greater degree than the British Museum the motive which should govern the future of all museums: a visible representation of the development of ancient art.

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More precise explorations of the Greek West were now planned at Athens. These regions had in earlier times exceeded the mother country in wealth and importance. The Greek remains of Lower Italy, scattered along an extensive coastline, had so far, with the exception of Pæstum (p. 9), attracted little interest. At the beginning of the century the architect William Wilkins—whom we have already seen at Athens—decided to go there, and published in 1807 his investigations in a great work, " Antiquities of Magna Græcia." He was followed in 1812 by Cockerell, who had chosen Sicily for his inquiries (p. 36). Of all Greek countries Sicily is the one richest in temple ruins. Girgenti, the ancient Akragas, offers the most striking ones to the beholder, for no less than seven temples, in very different states of preservation, it is true, attract the architect. Cockerell began here.

The ruins of the enormous Temple of Zeus tempted him to design a reconstruction. New facts and problems presented themselves, as in the closed wall with half-columns instead of the customary open row of columns; the equally abnormal construction of the cella wall, with its projecting pilasters and the remains of colossal giants supporting the entablature, the original position of which was only determined with great difficulty. In a supplementary volume to a new edition of the "Antiquities of Athens," in 1830, Cockerell tried to solve some of these problems.

The ruins of Selinus, the westernmost Greek city on the south coast of Sicily, are less conspicuous, for the Carthaginian devastations in 409 had been more thorough. Notwithstanding this, on two elevations flanking the former harbour, the remains of at least seven temples have been found, two of which, usually designated as B and C, date from very early times—it was at first supposed from the end of the seventh century. In the winter of 1822–3 the English architects Samuel Angell and William Harris excavated here, and the latter died of the treacherous fever. Everything showed an unusual and archaic plan; the great length of seventeen columns and a width of six columns; toward the east a double cross row of columns instead of the usual single one; finally the Pronaos was without columns, but had a special chamber behind the cella; all these had never as yet been found in Attic or eastern Greek architecture. Special interest was evoked by the fragments of the very ancient metopes, three of which it proved possible to reconstruct out of 32, 45, and 48 fragments respectively (Perseus and Medusa, Herakles and the Kerkopes, and a Quadriga).

But this heavy archaic sculpture aroused less interest than the many traces of original colouring, which gave rise to the question of the painting of sculpture. This again led to the question of the painting of architecture,

METOPES OF TEMPLE AT SELINUS

PALERMO MUSEUM

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which at once attracted great attention. This question was eagerly studied the following winter by the architect Jacques Ignace Hittorf, born at Cologne, but now working in Paris. He travelled to Sicily accompanied by his pupils Ludwig Zanth and Wilhelm Stier. The coloured architecture of the Norman remains in Sicily may have influenced Hittorf, but, be this as it may, he soon came to the conclusion that all Greek architecture had been coloured. This consideration he tried to demonstrate in his "Architecture antique de la Sicile," 1826–30, and later in 1851, in an enlarged form in "Architecture polychrome chez les Grecs." Gottfried Semper, who had travelled in the South in 1830–2, had, in the meantime, after a careful examination of the ruins, arrived at the same conclusions, and expressed the view that painting had completely covered Greek architecture. This was contrary to earlier traditions, and excited the most animated discussions. Many observations of Hittorf's and Semper's have in fact succumbed to more critical examinations, and the a priori æsthetic claim, that the existence of colour on some buildings must necessarily imply that all architecture had been coloured, has been refuted by convincing evidence. In historical questions of this nature, only facts can decide, not theories. But, in spite of all this, the suggestions of Hittorf and Semper acted as a great stimulus, and their assertions only required certain qualifications. Subsequent investigations have provided these, and to-day it is as certain that Greek architecture did not lack painting as it is that its use was limited by material, local custom, and the taste of the times.

In Sicily later investigations have to be taken into account, made by Dörpfeld, Borrmann, and their companions (1881), of coloured terra-cotta slabs, which had covered certain upper parts of the buildings. These colours, burnt into the terra-cotta, were practically in-

destructible, and here the more sombre tints of yellow, red, and black have been preserved, corresponding probably to those of the rest of the building, in contrast to the light blue and red on the glowing marble of the monuments of Attica.

The investigation of Greek buildings in Sicily, begun by foreigners, was continued most successfully by natives. The Duke of Serradifalco, supported by the young architect Saverio Cavallari, proved an enlightened patron of art. Among the new finds of greatest importance were two half and four complete metopes, both of the temples on the eastern hillside at Selinus. The nude parts of the female figures of the four metopes of the Heræon were of marble, while the rest was worked in tufa (with various traces of colour), thereby exhibiting an entirely new technique in coloured sculpture, nearly related to the painting of terra-cotta. About the same time in 1828 the young Duke de Luynes, with the architect F. J. Debacq, investigated the ancient remains of temples at Metapontum, the old Achæan city on the Gulf of Tarentum, rising out of marshy and fever-breeding surroundings, "*anticamera del diavolo.*" In reference to the above question, it may be of interest to mention a spout of earthenware with an expressive lion's head, on which the colours are well preserved.

All these eager researches in the Greek West formed a most valuable supplement to the investigations in Attica and the Peloponnese. The architecture of the earlier periods had become more intelligible; the Doric style in particular, which had a parallel development in the West and the East; many peculiarities were noted on which at first the student had been inclined to base hasty generalizations.

The eye had to be trained to appreciate the fact that Greek art can be many-sided, even in so uniform a creation as the Doric temple seems to be. It proved wisest not to

construct premature theories or systems which might obstruct a clear view into the diversity of phenomena, but to observe facts quietly, and to keep an open eye for the true historical development.

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Greece had meanwhile sunk back into her Turkish repose. The members of that international circle of friends to whom we owe the discovery and the harbouring of the sculptures of Ægina and Bassæ had left Athens. Cockerell and Foster had returned to England, the former developing extensive professional activity, the latter living quietly in Liverpool. Stackelberg had been taken prisoner by pirates in 1813, and was rescued after great sacrifices by his friend Haller von Hallerstein. Haller died of fever in Thessaly in 1817. Stackelberg and Linckh had meanwhile gone to Rome to live, and were joined there by Bröndsted. In Greece, the discovery of the Aphrodite of Melos was the only archæological event to interrupt the calm.

This was an instance of an accidental find, the romantic details of which are still shrouded in darkness. In spite of an eager search, in all manner of records, it has been impossible to obtain all the data, and they seem practically irrecoverable, as important documents have disappeared. The circumstances are as follows: In one of the early months of 1820 the peasant Georgios of Melos found the statue of the Aphrodite in several pieces. Some French officers inspected the statue, among them the afterwards famous navigator, Dumont d'Urville; the French agent at Brest informed David, the French consul at Smyrna, of the find. He again informed the ambassador at Constantinople, the Marquis de la Rivière, who offered to buy the statue of which he had heard so much.

In the meantime a Greek priest had bought the statue of the Commune of Melos to present it to an influential

personage at Constantinople. He had bought it, but it had not yet been paid for, when in May, the Secretary of the French Legation, de Marcellus, appeared at Melos, and acquired the statue from the commune for the trifling sum of 550 to 750 francs, and carried it off at once. The priest protested at Constantinople, and the commune was thereupon fined 7000 piastres, but, on the representations of the ambassador, this sum was reduced. Some more fragments were collected in Melos in November, and the entire collection was presented to the King, Louis XVIII, who handed it over to the Museum of the Louvre. The statue was put in place there in May, 1821. Probably with a view to economize the precious Parian marble, the statue is made in several pieces and joined in the manner customary in works of later times. The body is made in two pieces; strangely enough the joining does not take place where the nude and the drapery meet, but cuts across the folds of the drapery in an ugly manner. A separate piece had been inserted in the right hip. The arms had been fixed on, but only a portion of the left upper arm and the hand holding an apple had been found. These are so inferior in workmanship to the great beauty of the body as to suggest a later restoration. Below, near the left foot, the plinth shows in its entire depth a slanting contact surface which, according to the evidence of the former director of the Louvre, Count Clarac, was joined to a block of marble of slightly different grain. This had extended under the slightly raised foot of the statue, and bore on its face the inscription of the artist (the three first letters are missing, but can be restored with certainty), Alexandros of Antioch, on the Mæander, a city founded in the beginning of the third century. Judging by the character of the letters the date of the inscription would fall about 100 B.C. On the upper surface of the block there is a square dowel-hole, into which fitted, according to a sketch by an amateur

taken in Melos, a youthful herm of mediocre work, which was transferred to Paris from Melos with the statue. Unfortunately the important block with the inscription disappeared early—since Clarac (1821) no one has seen it —a fact which has given rise to the most varied theories, not yet settled to-day. No serious doubt can be entertained that the statue is the work of Alexandros. To him is due the addition of the tasteless herm (a restored copy by the French sculptor Claude Tarral makes this evident), and of the apple (Greek μῆλον), an emblem of the island of Melos ; on the other hand we are indebted to him for the excellent reproduction of the body and head of a superb original, probably of the time of Scopas.

The illuminating beauty of the original conception visible here, and the excellence of the work in the main parts of the body (the drapery is less well done, and the back quite unfinished), attained rapidly for the " majestic woman of Melos " a distinguished position, and secured it with entire justification. There is hardly another antique statue, with the exception perhaps of the Hermes of Olympia, which has acquired so immediate and so lasting a popularity.

The Greek insurrection had broken out shortly before the Melian had been placed in the Louvre. Twice was the Acropolis of Athens bombarded, first in the winter of 1821–2 by Voutier and the Philhellenes, and five years later by the Turks under Reshid Pasha. The west front of the Parthenon was greatly damaged by artillery fire, and the Erechtheion was shattered by shells and lost another Caryatid. Since 1825 Ibrahim Pasha had occupied the Morea, until a sudden change was brought about by the unexpected naval victory of Navarino. In 1828 a French army under Maison entered the country again, as in Egypt, accompanied by a scientific staff. The first map of the peninsula was prepared from an accurate survey,

and the natural conditions thoroughly examined, as well as the relics of art and civilization.

An excavation undertaken at the Temple of Zeus at Olympia in May and June, 1829, proved specially productive of results. The French consul Fauvel had discovered its scanty remains in 1787, and these were again recognized by the English geographer Leake in 1801. During a six weeks' campaign the architect Abel Blouet and the archæologist J. J. Dubois sought for the back and front of the temple. Although no traces of pediment statues were found, they came upon some of the Herakles metopes, above all, the splendid one representing the hero struggling with the Cretan Bull.

Partly the heat and partly the strict orders of the tyrannical President Kapodistria soon put an end to these excavations, for a patriotic Greek had informed against the strangers. The Museum of the Louvre was, nevertheless, enriched by a few reliefs exhibiting an entirely new style, and differing from the Attic, Æginetan, and Selinuntine, testifying to the great diversity of Greek plastic art. The observations made in Sicily in regard to the polychromy of Greek sculpture were again confirmed by the traces of vivid colour still visible on these reliefs.

The new King of free Hellas, the Bavarian Prince Otto, landed at Nauplia in February, 1833. The Turks at once evacuated the Athenian Acropolis to make room for a Bavarian garrison. The fortress was to be abolished on the citadel, which was to be used only for archæological studies. It was, in fact, threatened for a time by artists. The Bavarian architect, Leo von Klenze, restored some columns of the Parthenon with wretched patchwork, and the Prussian architect Karl Friedrich Schinkel even conceived the idea of building a royal palace on Athene's rock with the Parthenon gracing the royal court. A more useful work was the clearing away of houses and rubbish from the Acropolis, and the opening up of the approach

to the Propylæa, labours which were executed under the superintendence of the active scholar Ludwig Ross, who had been appointed Conservator of Antiquities. He and his colleagues, the architects Edward Schaubert and Christian Hansen, succeeded in making a genuine restoration by rebuilding the small Temple of Athene Nike on its towerlike eminence above the entrance to the citadel in 1835; the blocks had to be picked singly out of the Turkish bastion erected against Morosini (p. 11). Many valuable hidden fragments were discovered during the general clearance, numerous inscriptions on stone of great value to art and history, and many fragmentary pieces of sculpture, of the Parthenon frieze in particular, among these an exceptionally well-preserved slab of the group of the gods of the east frieze.

Ross unfortunately felt in 1836 forced to resign his position, to the great loss of archæology.

This was transferred to Kyriakós Pittákes, an industrious and faithful worker, but a man lacking in culture, and a petty guardian of the treasures confided to his care. He continued clearing the Acropolis, and piled the sculptures gathered one above another in the Turkish cisterns; he rebuilt some of the walls of the Erechtheion, and restored the Caryatid porch, and below the Propylæa he constructed a rather clumsy flight of steps. But, with these exceptions, his interest consisted only in the publication of newly-found inscriptions. These epigraphic interests were of paramount importance to the Archæological Society, formed in the Parthenon in April, 1837, about the same time as the foundation of the University. Almost three decades passed before the Society undertook any archæological work. It was owing to an accident that the most remarkable discovery of sculpture occurred in this period, that of the very archaic so-called Apollo of Tenea. This came soon after into the possession of the Austrian Minister Prokesch von Osten,

who seven years later handed it over to the Glyptothek in Munich. In the meantime foreigners again had devoted themselves to archæological work. The English architect F. C. Penrose, in connection with G. Knowles, began in 1846–7 to survey the Parthenon and Propylæa with incomparable accuracy. Penrose's minute measurements created the greatest interest, inasmuch as he confirmed the horizontal curves of the steps and entablature of the Parthenon, which had first been observed by his countryman J. Pennethorne in 1837.

About the same time the French architect A. Paccard was engaged on a restoration of the Parthenon, which he intended to be used in connection with a great work on this temple and its sculpture, undertaken by Count Léon de Laborde, but unfortunately early abandoned. The architect J. M. Tétaz undertook similar work in connection with the Erechtheion, without, however, solving the riddle of this building.

While Englishmen and Frenchmen were actively engaged on the Acropolis, and the Germans L. Ross and H. N. Ulrichs were eagerly travelling in Greek lands—Ross in particular opened to science the Greek Islands as far as Rhodes and Cyprus—great activity was exerted behind the scenes, in diplomatic circles, by the protecting powers, Russia, England, and France. The minister of the latter, the old Philhellene, Piscatory, succeeded finally in September, 1846, in establishing a French School in Athens, with the object of investigating the language, the history, and the antiquities of Greece on the spot.

Some years passed before any remarkable results were attained. The directorate at first was hardly conscious of its aim, but the many journeys undertaken by its members brought about a more general knowledge of their surroundings. Great sensation was caused by the work undertaken by a pupil of the school, Ernest Beulé, 1852–3, afterwards Minister of the Interior, who un-

covered parts below the stairs of the Propylæa. The remains of a late stairway were recognized by the architect Titeux, which again led to the discovery of a lower gate, the "*porte Beulé*"; which at first was attributed to the period of Pericles, but subsequent investigations proved it to consist rather of patchwork of the times of the Antonines. Beulé's book on the Acropolis appeared in 1853, and holds a place midway between popular and scientific treatment. As distinguished co-workers and observers there appeared early Léon Heuzey and Georges Perrot; Heuzey's book on Olympus and Acarnania appeared in 1860, and was the first scientific achievement of the French School.

We shall meet both men again later.

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The first half of the century had opened to science the Greek countries in Europe, and the foundations for new investigations had been laid. Archæology gained time in the pause between the excavations to study what had been acquired, and to join, in the meantime, as best it could, the fragments into a whole.

IV

THE SEPULCHRES OF ETRURIA AND ANCIENT PAINTING

ARCHITECTURE and sculpture formed almost exclusively the subjects of the two preceding chapters; painting has only incidentally been considered in speaking of the wall paintings of Herculaneum and Pompeii (p. 9). As examples of art, these represent mainly the Roman Empire, to which period they chiefly owe their origin. It is only in considering the subjects that any suggestion of Greece is obtained, as these consist chiefly of Greek myths, and in rare cases only are these pictures connected with Greek paintings of which we have literary knowledge, as, for example, the small relief-like composition illustrating the Marsyas myth after a painting by Zeuxis.

The publications on Greek vase painting during the early decades of the century, chiefly of the finds in Lower Italy, had not been important, and frequently incorrect copies had been made. The collection of vases acquired in Naples by Sir William Hamilton, and sold to the British Museum in 1772 (p. 42), probably influenced the Wedgwood factory, so that "Greek," "Etruscan," and even "Pompeian" vases became the fashion. But all scientific appreciation of Greek painting and its development became lost in a maze of fantastic and amateurish dreams only concerned with the subjects represented,

and finding mysterious meaning therein, as these responded to the prevailing taste for a medley of religious and pseudo-scientific romanticism in the manner of Creuzer.

A change, however, came from a direction where it was least expected. Greek painting had its resurrection on the " barbaric " soil of Etruria, instead of on Greek soil, and Rome became the place of observation.

Stackelberg had again settled in Rome in 1816 to mature there, with liberal assistance and amid stimulating environment, the results of his investigations made on Greek soil, especially of the temple of Apollo at Bassæ. He soon formed a close friendship with his Pylades, August Kestner, the fourth son of Goethe's Lotte, who lived in Rome as a Hanoverian diplomatist. He was a man of strong artistic tendencies, and an eager collector. After some years these two were joined by Eduard Gerhard of Posen, considerably younger, but an able pupil of Böckh, and influenced by Creuzer. He had first come to Italy in consequence of an affection of his eyes in 1820, and experienced always a great longing to return thither. This wish was gratified in 1822. At that time Niebuhr, the regenerator of Roman history, was Prussian minister at the Papal court, the second of a distinguished line (Humboldt, Niebuhr, Bunsen), so that, according to a witty remark of Ampère, Prussia was not represented at the Papal court, but Science at Ancient Rome !

Niebuhr was able to secure Gerhard for his contemplated " Description of the City of Rome." But still more far-reaching were the results of the friendship Gerhard formed with Stackelberg and Kestner ; this came about through Bröndsted, Stackelberg's companion in Greece, who was some years in Rome as Danish chargé d'affaires. When in 1823 the gifted but unmethodical Theodor Panofka of Silesia joined this circle, the friends united as the Roman Hyperboreans ; they read together

Pausanias or Sophocles, or investigated the scattered antiquities of Rome and the surrounding country. The four Hyperboreans were of very different types. Kestner was not greatly interested in scientific research, but felt inspired by all that was beautiful and elevating. Stackelberg had the most artistic temperament, with an inclination toward mysticism, and was a delicate, almost too elegant draughtsman. Panofka's imagination acted as a stimulus to his companions, and attracted a wider circle about him, particularly Frenchmen, who were delighted by his *jeux d'esprit*. Gerhard was the most thoroughly learned and scientific of the four. Although the impartiality of his scientific conclusions was somewhat impaired by the premature adoption of a system, yet his clear insight into the demands of science, combined with energy and executive ability, were of the greatest importance. He gained people and means for his aims, and knew how to use both to the greatest advantage. It was Gerhard particularly who realized with amazement the vast wealth of pictorial and plastic evidence of antiquity, which perhaps Zoega alone had studied before him. This was greatly augmented when the hardly known treasures of Naples, Magna Græcia, and Sicily were added to those of Rome. The few monuments illustrated in the popular books of Millin and Hirst, or even in the still rather scanty scientific literature, as the works of Visconti and Zoega, could not compare with the abundance awaiting publication. Thus through the newly gained knowledge were realized "the boundless possibilities of an expansion of the archæological material," or, as Gerhard put it in an epigram: *monumentorum artis qui unum vidit nullum vidit, qui milia vidit unum vidit.* Here, above all, a remedy had to be found.

This came about in a twofold manner. It first became necessary to ascertain by trustworthy and correct cata-

logues what antiquities the museums contained. Gerhard undertook the task alone for the Vatican, and with Panofka that of the less-known museum at Naples. The second and more difficult task, as it required good draughtsmen, was the collecting and publishing of illustrations, to extend the then existing narrow range of vision. In Berlin, where the museum was fast being completed, Gerhard was able to raise funds for the publication of unedited drawings. He also induced the firm of Cotta to undertake a great work originally designed to contain 500 folio plates, the "Antike Bildwerke," which, unfortunately, through no fault of Gerhard's, was interrupted before one-third of the scheme was complete. Many weak points in Gerhard's scientific attainments became evident: the exclusive interest for the subject-matter of works of art, particularly mythological, and his preference for less well-known styles, e.g. often for quite shapeless terra-cottas, which at any rate could hardly receive the reproach of being "only beautiful." But his main thought must not be lost sight of; he aimed at securing a new and broader foundation for archæology!

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Gerhard first learned to know Etruria in 1824, while these plans were growing and gradually developing. During the previous century the land of the old Etruscans had fallen into ill repute among antiquaries, in consequence of the extravagant efforts of a narrow clique of local patriots called the "Etruscheria," who tried to represent their country as a model of perfection in ancient times. The flood-tide of this movement had long passed, and two respected scholars, Giuseppe Micali and Francesco Inghirami, were at the time engaged in studying the antiquities of Etruria and placing them in a correct perspective. The unexpected wealth of the country in works of art, both in private and public possession,

nevertheless greatly surprised Gerhard. There were two classes of art work peculiar to old Etruria, which, although insignificant and frequently inartistic in themselves, excited his interest in consequence of the subjects treated of: metal mirrors with incised designs on the back, and the more or less cubical cinerary urns, frequently adorned with mythological reliefs and coloured decoration. He collected many drawings of both classes, and of the former many originals, now in the Berlin Museum.

In the year 1827 something quite novel was added to these two classes of not unknown but little noticed monuments. In Corneto, the ancient Tarquinii, were discovered in several newly opened sepulchral chambers richly coloured mural paintings. This news was not long in reaching Rome. Gerhard was in Germany, but Stackelberg and Kestner, joined by the Bavarian architect J. H. Thuermer, went there together, and devoted several weeks to copying in coloured drawings the richly painted walls of the four sepulchral chambers. The largest of these—the "*grotta dal corso delle bighe*"—was assigned to Stackelberg as the most experienced draughtsman. The publication of the forty-four large plates was unfortunately abandoned soon after its beginning through the same negligence which prevented the completion of Gerhard's "Antike Bildwerke," although the drawings already had been placed on stone. In a roundabout manner the original coloured plates have come into the possession of the Archæological Art Institute of the University of Strasburg, but only very inadequate copies have appeared. These paintings did not long remain unique. At Corneto other grottos were soon found with wall paintings, and similar tombs were opened at Chiusi, Veii, and later at Cerveteri and Orvieto. A long series of mural paintings was thus gradually discovered, setting forth the development of this branch of Etruscan art in tolerably complete sequence from the

beginning of the sixth to that of the fourth century. Various peculiarities and a certain coarseness, to which strongly marked naturalism may be added, recalling the "*verismo*" of the Tuscan art of the *quattrocento*, may be considered original. These qualities attracted attention mainly to the Etruscan element in these paintings, especially as the love of portraying scenes of daily life excluded all thought of the mythical subjects of Greek art. But it gradually became evident that Greek models and Greek suggestions were the true root of Etruscan art. This conviction was all the more important as practically nothing remains to us of pure Greek wall painting. Thus an insight was gained into the development of Greek painting, though only reflected from an Etruscan mirror. But the more closely the accounts of Greek painting were examined, and the more insight into its character was gained, the more evident it became that for about two centuries the chief stages in its development actually repeated themselves in this collateral Etruscan branch. The Etruscan tombs thus illuminated an obscure chapter of Greek art. The light was soon to become more brilliant.

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While the Roman Hyperboreans still continued to explore with success, Gerhard planned a new scientific organization, in connection with the art-loving and generous Duke de Luynes. When the latter joined this circle on his Italian journey in 1825, Gerhard aimed at nothing less than establishing an international association of all archæologists, which should publish a scientific journal and great works on the monuments. The centre was to be in Paris. In consequence of many obstacles this plan fell through and appeared to be abandoned. Gerhard, however, was not the man to give up anything once recognized as useful and important. Since Stackelberg's departure in 1828 he had remained with Kestner

alone in Rome, and, in spite of all difficulties, he held fast to the idea, and utilized the Italian journey of the Crown Prince Friedrich Wilhelm of Prussia in 1828 in such a way that under his patronage and with Bunsen's co-operation the foundation of "the Institute for Archæological Correspondence" was decided on in Rome on Winckelmann's birthday (9 December), 1828. The five founders, who called the first meeting of the new society on 21 April (the birthday of Rome), 1829, were Bunsen, at the time Prussian minister, Gerhard, Kestner, Carlo Fea (whose career extended back to Winckelmann's time), and Thorvaldsen, a former pupil of Zoega. This is hardly the place to pursue the history of this institution, which during thirty years exercised as a private organization the greatest influence on archæological science through its regular publications, its meetings, and the dissemination of appeals and suggestions. The ablest scholars of all countries belonged to the Institute, but Gerhard remained its life and soul, and was henceforth regarded as the true organizer of archæology. As Director of his institution he knew how to guard against dangers which arose in various forms.

A propitious fate placed a most precious gift in the cradle of the newly born Institute. Again the tombs of Southern Etruria were opened and disclosed, besides mural paintings, a great number of painted earthen vessels, which we habitually designate by the Italian name vases. For a long time painted vases, some even with Greek inscriptions, had been known. Southern Italy in particular had produced great numbers from its tombs (p. 42). Apulia became specially noted for discoveries of superb vases at Canosa, Ruvo, and other places. In the year 1828, about the time the first mural paintings were discovered at Corneto, there were found at Vulci, on the property of Lucien Bonaparte, Prince de Canino, for the first time graves containing painted vases.

The first discoveries were kept secret, but soon the extensive necropolis of the ancient town of Vulci was uncovered by its fortunate possessors in a search for vases. The success was almost incredible. Gerhard arrived at once on the site, and a statement which he sent in May, 1829, to the Prussian Official Gazette gives a vivid description.

" In the course of a search for the hidden finds which I have mentioned, there was revealed on a desolate stretch of land six miles long between the small towns of Canino and Montalto an extensive Etruscan burial place, perhaps that of ancient Vulci. Insignificant-looking grottos lying more or less near the surface were filled with the most beautiful Greek vases, many of them painted. At many different points of this extensive site excavations have been carried on constantly and successfully. Two other owners besides the Prince de Canino share in the interest, Sig. Candellor and Sig. Feoli, but the prince being the largest landowner has the greatest share. Besides the shepherds in this neighbourhood one hundred workmen have been employed daily in excavating under his personal supervision since last November. As a result of these excavations there have been daily found a great number of painted vessels and bowls, many in perfect condition, others were repaired on the spot. Your correspondent, who speaks as an eye-witness, can never forget the wonderful spectacle when he first beheld from the hill of Campomorto (the site belonging to Sig. Feoli) the numerous excavations scattered over the neighbouring plain on all sides, with the huge tumulus (*La Cucumella*) in the centre. On closer examination his astonishment only increased. The various bands of labourers, who had come from distant parts, chiefly from the Abruzzi and Romagna, were distributed under foremen from their own provinces ; and three tents formed the central point, into which poured the incessant stream of newly

found vases or vase fragments still covered with damp soil.

"Attempts were made at once to put the fragments together, in the tent occupied daily by the prince and his family; these were then sent to Musignano, the prince's country house, and handed over to experienced restorers. Their work continued day and night; your correspondent was greatly surprised to see one morning two beautiful large vases restored, which he had seen in fragments at the excavations the previous afternoon. The prince devoted all his time to the remarkable discoveries on his property, which yielded in a few months one of the finest collections of vases known to us. The study of these extraordinary discoveries and monuments proved sufficiently fascinating to induce him to undertake their interpretation."

The gentle irony implied in these last words alludes possibly to the fact that the Prince de Canino, at the inspiration of his chaplain Padre Maurizio, thought he recognized, for instance, on a drinking bowl, instead of Dionysos, who is crossing the sea in a ship with masts hung with vines, Noah the discoverer of wine. The name of the potter Exekias was declared to be the Hebrew Ezekiel, and some cracks that had been caused by bad firing in the glaze were looked upon as hieroglyphics dating probably from the time of the flood.

The general report made by Gerhard in regard to this entire find in a publication of the Institute in 1831, the "Rapporto Volcente," became famous as a model of a concise, complete, and lucid report, and laid the foundation for the science of antique painted vases. This new class of monuments played for a long time so important a part in archæology that satire of the "*Instituto dei vasi*" and of the "*science des pots cassés*" was not lacking. Nor has it quite subsided to-day; or has it again revived?

How did these apparently insignificant objects of decorative art attain such great importance?

It was, in the first place, the great insight we gained into the perfection of the handicrafts in antiquity, such as had caused the greatest astonishment at the discovery of Herculaneum. But if it was a question then of the refined bronzework of Hellenistic times, here Attic pottery was found in its elegant simplicity. Of forms a great variety existed, so that these could be divided into many classes, according to their uses. There were vases for storing, mixing, pouring, and drinking wine. Each class can be subdivided, and the gradual development of each can be accurately followed.

But what stamps these vessels with their special character is their indissoluble combination of the greatest utility with the simplest form, with the form best adapted to its purpose. It is as if they were copied from nature. A Greek vase appears as a perfect organism, and has not a trace of the arbitrariness which too often characterizes modern handicrafts. If anywhere the words may here be applied:

"*Des Körpers Form ist seines Wesens Spiegel; Durchdringst du sie, löst sich des Rätsels Siegel.*" *

But the pictorial representations on these vessels, even more than their form, offered to archæologists of all nationalities rich material for scientific investigations; indeed, in accordance with the tendency which prevailed in the science of the day, this aspect was at first the most prominent. The new knowledge acquired from mythological representations was indeed very great. Not only did long-familiar myths appear in a new guise, so that their gradual development became intelligible, or that older and lost forms could be traced, but not a few new myths appeared unexpectedly, and as very popular ones, for

* The form of a body reflects its inner being; apprehend it, and the riddle is solved.

which literary evidence, if it existed at all, had been meagre or even misleading. Thus the department of science known as the mythology of art attained entirely new significance and scope. Not only Gerhard (p. 59), but all the classical archæology of the day, depended on mythology. Only gradually, and at first only by single individuals, were these numerous representations valued as giving us a closer, and at times a most attractive insight into the daily life of the Athenians.

Gerhard, in his " Rapporto Volcente," laid stress upon a third point of view by noting the importance of this new material in connection with the history of antique painting. The history of earlier painting is essentially the history of painting on clay ; the most ancient representatives of the class of πίνακες are such painted clay tablets as those which covered the walls of some ancient tombs at Cerveteri. Gerhard's critical eye distinguished four main groups in vase painting which followed one another consecutively, the oldest an " orientalized " style ; a silhouette style of black outline drawing upon a red background ; red figures on a black background with many variations ; to which finally may be added a style, not found in Etruria, but frequently in Lower Italy (Apulia and Lucania), of painting in many and varied colours which developed from the red-figured style. This division still exists to-day, although we have learned to mark distinctions closely, and our knowledge of older styles has vastly increased. But a fourth most important question demanded an answer. Was it possible to consider these painted vases, found in Etruscan tombs, as a product of Greek painting, and to trace with their aid the history of its development ? In spite of Greek style, Greek subjects, and Greek inscriptions, this was not at once admitted by all. At that time, in Greece proper, only single finds of vases had been made, and most of these were only published by Gerhard in 1837 from Stackel-

berg's posthumous writings. It was indeed merely local patriotism of single Italian scholars that declared in favour of Etruscan origin. But had these vases originated from Greek settlers in Etruria, or had they been exported from Greece? (The first to think of Athens was Karl Otfried Müller.) These and similar questions were eagerly discussed, and received a great variety of answers. The enlightening word on this subject came finally from the philologist Gustav Kramer (1837). He was staying in Rome on account of his studies on Strabo, and had become connected with the Archæological Institute. Judging from the palæographic characters of the inscriptions, he ascribed the "orientalized" vases to the Corinthians; the black and red figured vases to the Athenians; he even thought it possible to trace the origin of the so-called pictorial style of vases of Lower Italy to Athens. Kramer encountered a great deal of opposition, for archæologists did not consider him a competent judge. His opinions were only fully justified seventeen years later by Otto Jahn, who re-examined them critically in the introduction to his "Beschreibung der Münchener Vasensammlung" in 1854, except that Jahn, with most of his colleagues, removed the home of the pictorial style of vases from Athens to Lower Italy. According to the knowledge of Greek palæography of those times Jahn felt himself justified in assuming the following chronology for the vases: the black-figured style, to judge from the lettering, belonged to a period extending to the beginning of the Peloponnesian War, and the red-figured style must have existed for a long time beside it. Their origin in consequence dated from before the Persian Wars (480). The "severe" style reigned supreme in the fifth century; the "free" style came in toward the end of that century, and prevailed during the fourth century.

These suggestions indicate sufficiently the interest

excited in the archæological world by the finds of Vulci. But after all it was merely a modest handicraft, and could not satisfy the longing for the contemplation of the great Greek art of painting. This desire was finally gratified by the discovery of the great mosaic of Alexander the Great at the battle of Issus, found in the "Casa del Fauno" in Pompeii. It was not an actual painting, to be sure, only a presumably Alexandrian copy in mosaic; but the composition offered an excellent model of a battle scene, inasmuch as a general view of the entire action had not been attempted (it never can make a clear picture), but the decisive moment is chosen and clearly expressed of the meeting of Alexander and the Great King. No beholder can doubt as to the following defeat. It is a picture in the grand style; Goethe has well rendered the impression it makes in words written shortly before his death: "The comments of our contemporaries and of posterity will not suffice to criticize correctly such consummate art, but after all examination and contemplation we shall be forced to return to simple and pure admiration."

While at the end of the third and the beginning of the fourth decades Italy offered such important results to Archæology, only a few single finds were recorded there during the next decades. Alessandro François (1796–1857) belonged to a group of men who, with the greatest energy and success, carried on excavations in Tuscany. In Etruria he had worked in numerous burial grounds, and during ten years he explored the old sites along the Maremma coast for Noel des Vergers, the son-in-law of the French publisher Firmin Didot. With extraordinary skill and sure method he succeeded in discovering a site, or in determining the locality of a necropolis (e.g. at Pisa and at Volterra). His two greatest discoveries concern the last-named province of antique painting. In a grave near Chiusi, the old Etruscan capital Clusium, he found

Calydonian Boar Hunt

Games at the Funeral of Patroklos

Peleus, Thetis, and the Gods

Achilles pursues Troilos

Animal Scenes, Sphinxes, etc.

Photo, W. A. Mansell & Co.

VASE BY KLITIAS AND ERGOTIMOS

FRANÇOIS VASE FROM CHIUSI, FLORENCE

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in 1844 a superb example of the antique potter's art and of painting on clay, but its countless fragments and sherds were scattered throughout the tomb. It is now known as the François Vase, after its discoverer, and forms one of the chief treasures of the Etruscan Museum in Florence, and although it was recently shattered again by an act of wanton barbarity, it has been once more almost perfectly restored.

To appreciate the trials, sorrows, and joys under which this find was made and secured, one must read this excellent man's report. This great vase, about two feet high, forms our best example of an early Attic style, till then little known, dating from about the time of Solon, and marking the transition from the Corinthian to the black-figured style. It thus filled a great gap in the history of vase painting, and the many bands surrounding the body of the vase offered a surprising number of carefully executed mythological representations. These enlightened us as to many important contemporary works of art, as the so-called chest of Kypselus and the throne of Apollo at Amyklai near Sparta, both of which are only known to us from the descriptions of Pausanias. By placing the painted Attic pottery alongside of the wooden Corinthian chest and the Ionic stonework of Laconia it becomes very evident how all over Greece, during the first half of the sixth century, a need was felt of expressing the great wealth of mythological subjects in a permanent and artistic manner in every branch of art. And as in the epos single poems were gathered to form great epics, so here single mythical representations were collected in a great series.

Towards the end of his life, in 1857, François with Noel des Vergers discovered at Vulci a great tomb with rich and varied paintings. A patch of soil which afforded nourishment to a row of oaks surrounded by barren rocks led him to suspect the presence of an ancient site. The pictures

of this "grotta François" have become famous, because they represent bloody scenes from heroic Etruscan legends placed side by side with similar scenes from Greek legends. Only after Otto Jahn had read and interpreted the Etruscan inscriptions of the former half was this fully understood. Thus appeared Macstrna (Mastarna), the Servius Tullius of the Romans, with his associates Caile and Avle Vipinas (Vibenna), and the names well known in Roman royal legends were not missing of Tanchvil (Tanaquil) and Cneve Tarchnu Rumach (Gnäus Tarquinius of Rome). For a time these pictures remained quite unique in their connection with Etruscan legends, but later similar ones were found.

Another contribution to our knowledge of Greek painting was offered by Rome in 1848, when a small house was demolished in the Via Graziosa on the Esquiline. A long painted wall became visible which had retained its decoration in colour for about 1900 years. Red columns painted so as to suggest perspective formed a sort of gallery, and looking between the columns the eye perceived an extensive landscape with scenes from the Odyssey depicted. These extended from the adventure with the Læstrygonians to the descent into Hades. A landscape composition of such extent, the illusion of a view seen through a merely painted gallery, the changing scenes of the wanderings of Odysseus—all this was new, and for a time awaited the clue by which its place in the history of painting could be assigned to it—a clue which was ultimately found in consequence of other discoveries and careful researches (Chap. VII). But a very different discovery, taking us back to remote antiquity, was made in April, 1836, at Cerveteri, the old Etruscan Cære. The arch-priest Regulini and General Galassi had the good fortune to discover a tomb of peculiar formation as well as of extraordinary contents. A long passage vaulted with overhanging horizontal layers of stone clearly in-

dicated great antiquity, and the rich utensils of bronze, silver, and gold likewise bore the same early character. Their forms and designs suggested Oriental influence or Oriental models. The Phœnicians were thought of by those who remembered their old activity in trade, described in the Homeric poems, and, as some individual articles corresponded to some described in Homer, the Regulini-Galassi tomb attained great importance. For men hoped to gain therefrom a picture of Homeric art. Such a picture, however, has had to be readjusted in the light of the discoveries of Schliemann and his successors (Chap. VIII). The entire contents of this tomb were transferred to the Etruscan Museum at the Vatican, opened during this year by Pope Gregory XVI, where he collected a great part of the objects obtained during the last decade in Etruria.

Important additions were also made in the department of sculpture. About this time a well-preserved portrait statue was found on the property of the Antonelli family, near Terracina, and presented by the owner to Pope Gregory XVI in 1839. Sophocles was soon recognized as the subject. It is the noblest portrait statue that has come down to us from antiquity, a wonderful character-study of the favourite tragedian of Periclean Athens, standing midway between the ideal presentation of the likeness of Pericles and the naturalistic treatment of the Demosthenes statue. The Pope found in the Sophocles a worthy motive for the establishment of an extensive museum for antiques in the Lateran palace, and added to this collection a huge mosaic of athletes, which already had been discovered in 1824 in the Thermæ of Caracalla. Hardly less important was the discovery in Trastevere in 1849 of the statue of an athlete, which after some hesitation was recognized as the Apoxyomenos of Lysippos. This good copy offered for the first time an example of the art of Lysippos, and for a long time remained the

standard for a close study of this last great master and law-giver in Greek plastic art. The statue holds a prominent place in the *Braccio nuovo* of the Vatican.

At the same time that new papal museums were thus being founded and older ones were being enlarged, Rome witnessed the formation of one of the richest private collections of the nineteenth century. This is of sufficient interest to be spoken of here, though new discoveries formed only a minor part of it. Giovanni Pietro Campana belonged to a well-to-do Roman family of the middle class, which had since the middle of the eighteenth century managed the Roman pawnbroker's shop, the Monte di Pietà. Giampietro was the third of the family to fill this office. He was only twenty-five years old, and had hardly finished his studies when Pope Gregory XVI called upon him to take charge of this institution, which was deeply encumbered with debt. He fulfilled all expectations, for in a short time he succeeded in making it the most important deposit bank in Rome. Campana had occasion to indulge his passion for collecting antiquities even during his youth, having inherited a small collection from his grandfather Giampietro (a favourite of Pope Pius VI), and a collection of coins from his father Prospero. He was enabled to indulge his taste, as he inherited a large paternal fortune and gathered his treasures into a small villa near the Lateran. But now in his new position Campana's collections increased rapidly. Although rarely accessible, they had, even in the thirties, gained a reputation. From mere collecting he soon proceeded to undertake excavations of his own. Those undertaken at Ostia in 1834 proved unsuccessful, while, on the other hand, he uncovered, in 1840, in the Vigna Condini, near the Tomb of the Scipios a large Columbarium, of the early times of the Empire. During the winter of 1842–3 Campana found at Veii a tomb of the greatest antiquity, containing the oldest known

Etruscan wall paintings. On Monte Abatone, near Cerveteri, the ancient Cære, he found in 1845 a less important tomb. His greatest success was soon attained on this spot. During the year 1850 there was discovered the so-called "grotto dei rilievi" (a large tomb chamber, displaying in its painted reliefs an abode of the living with correct copies of household furniture and utensils), as well as the so-called "Lydian sarcophagus," a great painted terra-cotta sarcophagus representing a bed upon which rested a couple, in extremely archaic style. This fine example of Etruscan terra-cotta was long kept hidden, but in 1856 similar valuable finds were made in the painted clay tablets which had adorned another tomb at Cerveteri (p. 66). The baked clay had preserved the colours of the paintings from exposure to the damp, to which wall paintings are usually subject. At Cerveteri, Campana acquired a great profusion of vases, among them unique specimens of a class till then unknown (Cæretan vases); their Ionian origin was only recognized later (Chap. IX). To the products of his own excavations he added purchases made in all parts of Italy; e.g. Campana bought of the Duke of Syracuse, the brother of the Neapolitan "*ré Bomba*," the products of his excavations at Cumæ—this collection contained the "queen of vases," a hydria with representations of the Eleusinian divinities in coloured and gilt relief. Even Greece contributed to the Campana collection.

In less than a quarter of a century a museum of amazing diversity developed. The marbles, numbering 500, consisted chiefly of the ordinary Roman work with a few good examples, a beautiful Niobe relief being one of the best. Campana had unfortunately adopted the wretched Roman custom of restoring arbitrarily broken statues and reliefs, and finally covering the whole with a dull white paste (Gnaccarini paste). The restorations were executed by the sculptor Filippo Gnaccarini, who

later acted with the same wilfulness in the Torlonia Museum. In consequence of his work the marbles lost all artistic charm and scientific value.

Of great interest was the collection of Roman terra-cotta reliefs, published by Campana himself, and hence retaining the name of the "Campana reliefs." These were Roman works for decorative purposes executed on Hellenistic models. Their trustworthiness and genuineness may here again be doubted, as Campana owned a pottery; for restorations of broken originals undertaken there resulted frequently in worthless *pasticci* or complete forgeries. The skilful restorer Pennelli, who is known to have taken part in other forgeries, was actively engaged here, and later accompanied the Campana collection to Paris.

Besides the terra-cotta reliefs there were a great number of restored terra-cotta figurines; in all, the collection contained about 1900 terra-cottas. During excavations in Etruria and Lower Italy there were discovered 3800 vases, many of extraordinary value, including fine examples of all the then known and many unknown classes. Everything was represented here in vast numbers; there were 600 bronzes, 460 glass vessels, nearly 1600 gold jewels or trinkets, gems, and selected coins, the two latter classes containing many extraordinary works.

Collecting continued thus at a rapid pace. During the fifties a new passion arose: collecting Italian works of art of the Middle Ages and of modern times. It did not take long to gather 1000 paintings from the thirteenth to the seventeenth century, of course with high-sounding names attached. These filled a large house in the Via del Babuino. About 700 pieces of majolica, chiefly of the coarser kind, supplemented the collection of paintings.

All these treasures, excepting the "Campana reliefs," were kept hidden. The owner, who had in the meantime

been made a marquis, only allowed a few chosen friends or highly recommended strangers to view his collections, and then only in parts. For instance, Heinrich Brunn, the Secretary of the German Archæological Institute, who had assisted in the publication of the catalogue of vases, remained long in ignorance of the existence of the Etruscan terra-cotta sarcophagus and the painted terra-cotta reliefs (p. 73); the large collection of paintings only became known in 1857, after the great catastrophe had overtaken the collector.

The passion for collecting had enticed Campana to outrun his fortune. His position as manager of a great bank had enabled him to take gradually £125,000 from the bank, at first with the consent of those in authority, and by giving as security for £4500 part of his valuable collection, and later by simply depositing his notes. According to well-informed persons this was all done in perfectly good faith, as he thought the great value of his collections sufficient to cover all loans. The collections had been valued by the official archæologist Pietro Ercole Visconti at £200,000. In order to obtain some relief from his increasing financial distress, Campana began about the middle of the fifties to negotiate in different quarters for the sale of his collections, and began preparing catalogues, which, however, in consequence of carelessness only appeared in 1858. These negotiations had not yet had any results, when suddenly in October, 1857, Pope Pius IX issued, from Bologna, threatening warnings against fraudulent administrators of public funds; soon after his return to Rome investigations were undertaken at the "Monte di Pietà," which resulted in the marquis going to prison on the 25th of November. A fortnight after this event I reached Rome, and found the city still greatly excited, and discussions still continuing. In the following year Campana was condemned to the galleys, but in January, 1859, he was pardoned, but exiled. It

took a number of years to dispose of the great Campana collection, which had been confiscated. In February, 1861, Russia obtained part of the sculpture, including the Niobe relief, some of the bronzes, and 518 vases—some of great value—for £26,000. To express his satisfaction at the sale, so at least it was said in Rome, the Pope added the beautiful hydria from Cumæ (p. 73). After long delay Napoleon III decided to purchase the remains of the collection for about £175,000. It came to Paris as the Musée Napoléon III, and the Louvre came into possession of the valuable Etruscan collection of glass vessels, gold jewels, terra-cottas, the Campana reliefs, about 300 marbles, and finally 3400 vases, which, when added to this already fine collection, raised it to a position of foremost importance. Minor pieces or collections were disposed of to smaller museums. Finally single and not unimportant groups of vases reached the museums of Florence, Brussels, and Geneva. The collector survived his fall more than twenty years, and finally died in 1880 in poverty in Rome, where he had long been forgotten.

Most of the single finds mentioned above (p. 68) were first interpreted in the publications of the Archæological Institute. For about twenty years German, Italian, and French scholars shared in this work under the guidance of the German Secretaries, and with financial aid from the Prussian Government and the Duke de Luynes (p. 61), until in the troubled year of 1848 the French section abandoned its activity, leaving the work of the Institute to the two other nations. This became more and more the centre of archæological activity in Rome, not only in consequence of its publications and its weekly meetings, but also on account of its constantly growing and important library. This proved of the greatest advantage to the younger German scholars who came to Rome from the end of the thirties onwards for the purpose

of serious study. They had been prepared in archæology at the German universities, where Welcker was teaching at Bonn, Karl Otfried Müller at Göttingen, and Gerhard at Berlin; and in the secretary of the Institute, Emil Braun, they found a gifted, if not a strictly scientific, leader. Braun, however, was one of the first to recognize the importance of archæological experience, such as had been gained by Jahn, Brunn, Stephani, Wieseler, Stark, and others. When, therefore, in 1856, after the most critical years, Heinrich Brunn took the place of Braun, the study of archæology had fully developed at the German universities, in consequence of the teaching of this older generation, and the crowd of *ragazzi*, who soon came pouring in, found under Brunn's leadership the Institute a sort of archæological university. The great usefulness of the Institute was further increased by more liberal assistance on the part of the Prussian Government and by some travelling studentships. But its activity was by no means exhausted, either in the training of young archæologists or in the publication of its regular journals (*Monumenti*, *Annali*, *Bullettini*), for it assumed again the two tasks which it had in a sense taken as a legacy from Gerhard (p. 58).

It was of primary importance to resume the cataloguing of the scattered antiquities. In Rome this task was undertaken chiefly by pupils of the Institute; Benndorf and Schöne catalogued the Lateran Museum; Schreiber the Ludovisi collection; Matz and von Duhm the scattered antiques in Rome, and at a later date Amelung and Petersen worked at the Vatican. At Naples, Helbig catalogued the paintings, and Heydemann the collection of vases. The numerous museums of Northern Italy were desçribed by Dütschke, and those of Florence by Amelung.

In Athens, Kekulé undertook the Theseion and Heydemann the smaller collections, while members of the French

School helped in this arduous task, Collignon cataloguing the vases, Martha the terra-cottas, and de Ridder the bronzes. In Munich Jahn catalogued the collection of vases, and Brunn the Glyptothek; in Berlin scientific catalogues were issued by Gerhard, Friedrichs, Wolters, Conze, and Furtwängler, and in St. Petersburg by Stephani. The sculptures of Spain were described by Hübner, and the scattered "Marbles of Great Britain" by Michaelis.

These labours, requiring the utmost industry and patient self-denial, supplemented the work of the spade. It is owing probably to the German character and to the scientific training given at the German universities, that this work was carried on mainly by Germans (for the same reasons the laborious work of providing the *apparatus criticus* for editions of the classics is chiefly in German hands); but to Gerhard's example and to the work of the Institute great credit is due. Thus the French who take an active part in this work are pupils of the French School at Athens, while the Italians, who for a long time lacked the opportunities of such a training, seldom undertook such work. Rare exceptions are presented by Giuseppe Valentinelli (Venice), Giovanni Jatta (Ruvo), and Antonio Sogliano (Pompeii).

England goes its own way. The British Museum, however, provides excellent catalogues of sculpture, coins, and vases, among which those of the collections of coins prepared by Poole, Head, and others, maintain a position of the first rank.

Another series of great undertakings of the Institute had already been indicated by Gerhard. He had recognized the great importance of collecting representations, as complete as possible, of similar works of art. He personally undertook the Etruscan mirrors; the great number of Greek vases made a selection necessary; a collection of drawings was all that it was possible to

undertake at first in regard to the Etruscan cinerary urns.

The model afforded by the "*Corpus Inscriptionum Græcarum*," which had been followed by the more methodical preparatory work for the Latin inscriptions, made it apparent how essential such collections are. Brunn again began with new material, the collection of Etruscan cinerary urns, and as soon as the Institute was transformed into an institution of the German Empire in 1874, and was possessed of greater means, new enterprises were undertaken; Reinhard Kekulé, with the co-operation of Hermann von Rohden and Franz Winter, published a collection of ancient terra-cottas; the Roman sarcophagi were undertaken by Friedrich Matz, and after his early death continued by Carl Robert. Alexander Conze, with others, published the Attic Grave Reliefs, a work executed as a commission from the Vienna Academy. The choice in the class of monuments frequently depended on finding a capable and willing worker. Great numbers of all classes of monuments, statues, busts, as well as vases, still remain unpublished.

The series of publications undertaken by this Institute, however, shows that these undertakings are impossible without extensive means and a staff of workers eager to work and willing to make sacrifices. Until now the Institute has pursued its way alone, but it does not seek any monopoly; other institutions and other nations will find a great field where all may co-operate. Paul Arndt, with a number of fellow-workers, has in the meantime prepared a photographic collection of sculpture.

It may be added here that the Archæological Institute in Rome has been the cradle for the study of Roman epigraphy, which has now become so flourishing. These studies were first introduced at the Institute by Count Bartolommeo Borghesi, and under his patronage Olaus Kellermann devoted himself to these studies. Later

Theodor Mommsen and Wilhelm Henzen undertook those epigraphic studies and journeys which culminated in the "*Corpus Inscriptionum Latinarum.*" That it was possible to carry this out so perfectly, under the able guidance of Mommsen, is again owing to the deep penetration and tenacious energy of Eduard Gerhard, who never tired of exhibiting his plans to the Berlin Academy, and finally carried off the victory after long resistance.

The labour and the completion of this great work had gathered together for half a century a great number of young workers—the Roman part had since the death of Henzen been carried on by Christian Hülsen—and, as is well known, this monumental work completely remodelled the study of Roman antiquities.

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The Roman nobleman Giambattista de Rossi had taken an active part in the Roman Institute since 1850, and also in the preparatory work of the "Corpus"; he became acquainted with Mommsen and Henzen about that time. The main subject of his studies was Christian Archæology, a subject which the Institute had excluded, so as to avoid all unpleasant encounters with the authorities of the Vatican. It will suffice to indicate here the entirely new sphere opened for this branch of archæology, through de Rossi's rediscovery of the Roman catacombs.

The catacombs, the subterranean resting-places (*Cæmeteria*) of Roman Christians of the first three centuries, scattered in great numbers about the city, had since the sixteenth century been the object of research and investigations. In 1632 there had already appeared the "*Roma sotterranea*," by Antonio Bosio of Malta, a work embodying the labour of thirty years. But an unlucky star had guided these earlier efforts. The graves of famous martyrs and saints had never been reached, although of many it was known in what catacombs they

were interred, and that they had received in the early Middle Ages the veneration of many pilgrims and believers.

One of the most famous burying-places had been a catacomb on the Appian Way, which had been known as the one containing the tomb of Pope Sixtus II, who was martyred in 258, and was sometimes designated as that of St. Cecilia, or of Callixtus, who had laid out this extensive place. It had generally been sought for near the church of San Sebastiano, where there had evidently been catacombs, but no trace could be found of the graves of these saints. And this was the case everywhere. Until the middle of the nineteenth century our knowledge of the catacombs was confined to the ordinary passages with the simple wall niche and their occasional extension and decorated grave chambers.

During the year 1841 Pope Gregory XVI gave the supervision of the catacombs to the learned Jesuit Giuseppe Marchi, who seriously undertook their investigation. He at once exploded the erroneous belief that the early Christians had used old pozzuolana quarries for burying-places, by proving that the catacombs had never been made in the soft soil of the pozzuolana earth, but had always been found in tufa, and that here also old quarries had not been used, but that the complex, narrow passages running frequently at right angles had been solely prepared as a resting-place for the dead. But Marchi proved only the forerunner of a greater man, and one who had accompanied him on all his expeditions —the young de Rossi. He towered far above his leader, having a broader horizon, greater sagacity, and more clear-sighted penetration.

A thorough study of the books of early medieval pilgrims (among which the itinerary of the convent of Einsiedeln is famous and of great importance) in connection with a systematic study of early Christian and

ecclesiastical literature, gave him a new and entirely different conception of the situation and relative position of catacombs. He thus came to the conclusion that the Catacomb of Sixtus was to be sought nearer the city than San Sebastiano. He tried to cover the surrounding country carefully in his investigations, and was finally rewarded in 1849 by finding a broken marble slab on which the words "*nelius martyr*" were still visible. From literature Rossi had learned that the martyr Cornelius, who had been killed in 251, must lie in a division of the Catacomb of Sixtus, and had received special veneration. He hoped thus to gain a definite clue. On the strength of this discovery the young scholar, then twenty-seven years old, urged Pope Pius IX to purchase the Vigna, where the fragment had been discovered, and received from the Pope the commission to continue his researches and investigations.

Thus opened those brilliant discoveries which led every year to new chapters in Christian Archæology. It soon became evident that during the fourth century, after the Christian religion had been established, Pope Damasus, to regulate the constantly increasing number of pilgrims who for centuries visited the tombs of martyrs, built wide staircases in great walled shafts, thereby ruthlessly destroying graves of the more insignificant dead, so as to lead the pilgrims straight to the graves of the saints or chief martyrs. These underground apartments received their light and air by specially constructed air shafts resting on great arches. In the earlier excavations, by chance such a shaft had never been reached, but on meeting a wall in a narrow passage it was concluded that the end of the subterranean burying-ground had been reached. If one of these walls had been demolished, de Rossi's discovery would have been made centuries earlier.

The first great tomb-chamber to be entered by de Rossi was that of St. Cornelius, and to complete the circum-

stantial evidence, there was found here the left half of the broken slab with the letters "*Cor*," which had formed the first part of the name, and the beginning of the title, "*ep*" (*iscopus*). De Rossi knew from the books of pilgrims that this chamber was some distance from the tomb of St. Sixtus. An eager search now began in the narrow passages extending to the height of several storeys, and all these had to be cleared of their debris. The grave of St. Eusebius was first discovered. Finally the scrawled inscriptions increased on the walls to which pious pilgrims had confided their hopes and aspirations. The expectations of the lucky finder were greatly raised, when near a door he came upon three invocations to "Sustus." The door, in fact, led to the main entrance of the Sixtus Catacomb, as it had been arranged in the third quarter of the fourth century by Pope Damasus. The main tomb was found in the background, but greatly damaged; in simple niches about the sides were the graves of eleven Roman bishops of the third century, the outside marble tablets bearing the names in Greek, the former official language of the Roman Church, without recording other distinction or papal dignity. In the corner, to the left of the tomb of Sixtus, a little gate led out of the so-called papal chamber into the adjacent chapel of Cecilia. The saint's grave niche was vacant, for in 817 Paschalis I had, as the times grew more disturbed, transferred the corpse to the church of St. Cecilia at Trastevere, where a statue by Stefano Maderna shows the martyr in the position in which she had been found. Byzantine paintings of the sixth and eighth centuries on the walls of the vault in the catacombs, testify to the veneration accorded this saint during the centuries of pilgrimages. There is still to-day on St. Cecilia's Day, 22 November, an impressive ceremony in the subterranean chapel, which has been cleared.

Thus passed the beginning of de Rossi's researches in

the catacombs. Those hours will ever remain a delightful memory to every hearer, in which the able and distinguished discoverer—on whose lips dwelt Peitho—related his recent discoveries and his future aims. During the following years he continued to give accurate accounts of what had been attained.

It is beyond the scope of this book to give a more detailed account of the arrangement of the catacombs and their decorations, and much less to enter into the discussion as to their interpretation. Nor do we wish to enter here into the development of the investigations of the catacombs; how one catacomb was carefully examined after another, and how gradually our knowledge of the paintings in the catacombs has extended. It is sufficient to remember here the labours of Joseph Wilpert. But Christian Archæology will always revere Giambattista de Rossi as its founder.

V

DISCOVERIES IN THE EAST

RICHARD LEPSIUS, whose earlier studies had been concerned with the Italian dialects, took part temporarily during the thirties in the work and direction of the Archæological Institute. While in Paris the young scholar had already devoted himself to the study of Egyptian hieroglyphics, which had now become intelligible in consequence of Champollion's great discovery. Bunsen greatly desired to include Egyptian monuments in the research work of the Archæological Institute, and urged Lepsius to continue his studies in this field. Lepsius, in fact, began his Egyptian work in 1837 with a revision of Champollion's interpretation, making great advance in the method. He thus entered upon the path whereon he attained his greatest success.

No important progress had been made, apart from the reading of hieroglyphics, in the study of Egyptian monuments since the Napoleonic expedition (p. 14). The Franco-Tuscan expedition sent out under Champollion and Rosellini in 1828 had in the course of a year (October, 1828, to September, 1829) gathered considerable material, and Champollion inaugurated a great advance in the knowledge of Egyptian history by the reading of inscriptions, the copying of which had formed the main object of the undertaking. The expedition had pene-

trated beyond Philæ (p. 16) to Abu Simbel with its rock giants, and had gone as far as Wadi Halfa.

Champollion, finally, had recognized the great disparity between the, until then, greatly overrated sculptures of the Ptolemaic-Roman sculptures (e.g. Dendera) and the genuine Egyptian monuments of the time of the Ramessids. In the domain of art, however, little had been gained showing important new results. The Ramesseum had been recognized, the royal tombs at Thebes had been entered, and the significance of the colossi as images of Amenhotep III (p. 16) had been established. The tombs of Beni Hassan, with their simple Protodoric type of column, excited the greatest interest; Champollion believed that he discovered therein the prototype of the Doric column of the Greeks. For he became convinced that Greek art had developed strictly in conformity to Egyptian art. In spite of all this, a wide field still remained for research work, particularly if equipped with means and permission to carry on excavations, as these had only taken place to a very moderate extent in former expeditions. Thanks to the great influence at the command of Alexander von Humboldt and Bunsen, Lepsius was able to enter upon his work now, for means had been secured from King Friedrich Wilhelm IV (a man more given to forming plans than to executing them) for an extensive scientific expedition to Egypt, lasting three years, 1843–5. Lepsius, hardly thirty-two years old, was placed at the head of the expedition, accompanied by a staff of architects and draughtsmen, among whom may be mentioned Erbkam. It was not simply a question, as heretofore, of inquiry and of carrying off that which lay openly before all eyes, but a question of research work and the use of the spade when necessary. The great length of time planned was to preclude all haste; thus, for instance, six months were devoted to Memphis and its tombs, seven months to the extensive ruins of

Thebes, and a month to the Island of Philæ and its environs. With the exception of the Pyramids of Beni Hassan, only monuments of the New Kingdom or of the later periods had been examined. The discovery of numerous monuments of the Old Kingdom was the first great result obtained by the Prussian expedition. The number of the most obvious witnesses of this brilliant period, the Pyramids, increased to 67 ; of the Mastabas, a style of tomb until then unknown, 130 were discovered. Although Champollion had only reluctantly acknowledged the great antiquity of Egyptian art, our knowledge of it now extended back into the fourth millennium. In Amenemhet III it was possible to recognize the constructor of Lake Moeris in the Fayum, the great basin regulating the Nile ; to examine his pyramids and structures—which Lepsius mistakenly identified with the famous Labyrinth—and to investigate the plans for damming the river. Later, in Upper Egypt, where the river becomes narrow, the Nilometer of the same king appeared, indicating the height of the Nile, at that time, as about seven metres higher than to-day. In Middle Egypt appeared the later tombs of the Old Kingdom, the rock tombs (for instance, Kom-el-achmar), and farther south the later tombs. The Ramesseum and the rock tomb of Rameses II were carefully investigated in the scattered ruins of Thebes, and still further south the rock temple of Abu Simbel with its colossi.

The expedition did not halt at the frontiers of Egypt, but penetrated to Ethiopia beyond Khartum, and even Sinai did not remain unexplored.

This much as to the extent of the expedition. Its results were of the utmost importance to the history of the country. As permanent guides numerous cartouches with names of kings were collected for the publication of the "Book of Kings" in 1858. The figure of the revolutionary King Amenhotep IV was first dimly recognized at

Tell-el-Amarna. Our historical knowledge also enhanced our comprehension of the history of art; for the great epochs of Egyptian art, from the Old Kingdom down to the times of the Ptolemies and the Romans, only now appeared in a clear light. Architecture, in connection therewith, was for the first time critically examined by experts. The reliefs covering the walls and the inscriptions were eagerly copied, squeezes and drawings were taken, all yielding valuable information as to language, religion, and the conditions of daily life.

It is not asserting too much to state that in consequence of this expedition Egyptology gained a new and an entirely changed foundation. The results attained were soon rendered accessible by the great illustrated work which formed a collection of documents, and by the organization of the Egyptian Museum in Berlin.

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The art of Assyria appeared on our horizon for the first time almost at the moment that Lepsius and his friends were investigating Egypt. From Mosul, the chief town in this region, the eye scans the vast region on the left bank of the Tigris, whereon are scattered in many places irregular earth-hills. Earlier travellers—Kinneir, Rich, and Ainsworth—had already recognized in these hills (flat at the top with steep and frequently broken edges) the sheltering coverings of ruins, and the site of old Nineveh had even been conjectured in the group of hills of Kuyunjik and Nebi Yunus (the grave of Jonah) opposite Mosul.

The credit of seriously beginning investigations belongs to Paul Emile Botta, who had been French consul in Mosul since 1842; the famous Oriental scholar, Julius Mohl of Paris, was his learned friend and patron. The excavations undertaken by Botta at Kuyunjik were fruitless. But after overcoming serious difficulties with

local authorities and the Pasha of Mosul he undertook excavations at Khorsabad, ten miles further north, near the eastern boundary of the plain, and his efforts were crowned with great success (1843–4). Upon massive terraces there appeared the vast palace which King Sargon erected after the conquest of Babylon in 710 as a summer palace or Versailles; the name of the site was Dur Sarukin (the hill of Sargon). Great courts with entrance gates were uncovered, stately halls, a maze of passages and rooms; one part of the palace contained a threefold harem and remains of a terrace-tower which had served as a sanctuary. The entrance gates were guarded by huge bulls and lions; the brick walls were partly covered with reliefs in alabaster representing chiefly scenes of the royal life, or they were partly covered with decorative friezes of coloured enamelled tiles. A new vista was opened here. Botta immediately tried, as may readily be understood, to find shelter for the sculptures, and sent them as soon as possible to Basra, whence they were conveyed to Havre in 1846. Paris was safely reached in February, 1847; among the sculptures were a pair of the large portal figures. In the autumn of 1843 the draughtsman Flandin joined Botta, and the two worked together, publishing their results. But the architectural investigation of this important ruin still left much to be desired. The French consul Victor Place and the architect Félix Thomas tried some years later to fill this gap, 1851–5. Their searching investigations succeeded in reconstructing this palace on paper, and thus casting a clear light on the peculiarities of Assyrian architecture. The English traveller and journalist Austen Henry Layard felt tempted to try his luck in consequence of Botta's great results. Means were offered him by Sir Stratford Canning, British ambassador at Constantinople. In 1845 Layard chose as the site of his campaign the great

rubbish mound of Nimrud, eighteen miles south of Kuyunjik, which had attracted his attention on his former journeys. Remains of the old city of Calah were soon discovered there. The first excavations were carried on under constant difficulties, arising from ill-disposed authorities, superstitious fanatics, and thievish neighbouring tribes. Nor did these difficulties cease the following year; such discoveries as that of the gigantic human head of a bull created the greatest excitement in the entire province.

The work, however, had sufficiently advanced to allow the first shipment to London to be made during the summer of 1846, a gift to the British Museum from Sir Stratford Canning. The museum now accorded some financial aid, so that excavations could be resumed in the autumn, although, unfortunately, without the aid of a draughtsman. As many pieces were too badly injured or broken to permit transportation, Layard had to come to the rescue again. No architect was on the spot, therefore little is known to us of the architecture of the ruins of Nimrud. The second shipment of sculpture took place in December, and with it ended the investigation of Nimrud. The palaces found here closely resembled those at Khorsabad. The alabaster wall coverings, with their rows of reliefs, were here found still in position or in the ground as they had fallen, and again the same gigantic animal figures formed the support of the portals. But all was larger, more impressive, and bore a more vigorous character, the sculpture, as well as the well-preserved colours. These ruins extended more than a century and a half further back, as far as the reign of King Assurnasirpal, who was the first of the great Assyrian conquerors. He had built in the years 875–68 the "North-western Palace" uncovered by Layard. There followed the "Central Palace," built by his son Salmanassar II, on which Layard also worked; of particular

interest was the "black obelisk," giving an illustrated chronology of thirty-one years of the king's reign. The remains of the unfinished "South-western Palace" with its reliefs are of later date, and resemble in style those of Khorsabad; the palace had been designed about 670 by Asarhaddon. This entire rich collection found its way to the British Museum, and with Layard's great publication and popular description helped materially to direct general interest to Assyrian art.

But Layard did not rest there. In 1849, being commissioned by the British Museum, he undertook work on the hills of Kuyunjik, where earlier attempts had not been successful, although trial excavations in 1847 had shown some good results. Layard now continued these excavations on an extensive scale until 1850. Again his efforts were crowned with success, and these results again went to the British Museum. He disclosed this time the latest period of the Assyrian Empire, the seventh century, from which date the palace ruins of Nineveh. King Sanherib and his grandson, Asurbanipal (Sardanapalus), were the chief representatives of this period. Judging from outward appearance the representations were very much the same as on the two other sites, but a new and more animated spirit pervades these sculptures, an attempt to abandon the old fetters and formalities. Such a work as the lioness mortally wounded in the spine, which, although her hindquarters are already paralysed, lifts his head and shoulders for a last roar, is far above all the creations of the older Assyrian sculpture. The extraordinary phenomenon is witnessed here of an art which for centuries had conformed to the most rigid rules suddenly rising before its end to a more vivid conception and interpretation of the life about it. It was not surprising that an explanation of this anomaly was sought for, and it was assumed that Ionian influences had here rejuvenated ancient Assyrian art. It is, however, to be

questioned whether the plastic art of the Ionians, in the beginning of the seventh century, had already attained this strength.

These Assyrian discoveries, made in the forties, opened a view of the court art of a secluded empire, showing distinctly the consecutive stages of development during three centuries. Its influence extended as far as Cyprus, where in 1845 Ludwig Ross discovered an image of King Sargon on a relief stele. Assyrian art belongs to the last pre-Christian millennium, and is, therefore, far later than the Egyptian, but yet is old enough to raise the question whether any light can be obtained from Assyria to solve the obscure question of the origin and style of Homeric art. Adrien de Longpérier pursued this path, and later Heinrich Brunn.

Since Chandler's "Ionian" expedition in 1764 Asia Minor had frequently been visited by several, especially by travellers, but they had either been guided by geographical considerations or had searched for the "seven churches of the Revelation." Not until the journeys undertaken by Charles Texier at the instance of the French Government in 1833–7 did archæological interests again become prominent. A number of buildings and plans of cities were drawn, unfortunately often so carelessly that later investigations revealed the untrustworthiness of Texier's great publications. The Doric Temple at Assos, a city on the south coast of the Troad, offered some novelties to the history of art. The primitive style of the architecture, with equally ancient reliefs upon epistyle and metopes, all hewn out of the brittle trachyte of the neighbourhood, created great interest. After the reliefs had been acquired by the Louvre, through the efforts of Raoul-Rochette, many voices assigned them to the very beginning of Greek sculpture. The American architect Joseph Thacher Clarke, who in 1881–3 re-examined the entire city of

Assos, at the instance of the Archæological Institute of America, became convinced of the contrary, and after examining the ground-plan of the temple, ascribed it to a period near the time of Pericles. An instructive example, showing that correct conclusions cannot always be definitely attained by the exclusive study either of architecture or archæology. To-day few will doubt that we have to deal with a peculiar provincial style of the sixth century. As the most important archæological achievements of Texier's journey may be mentioned the great temple site of Aizani (for a time supposed to be Hellenistic, until recognized as of the time of Hadrian), the Temple of Augustus at Ancyra, and the rock-reliefs at Boghas Koï and Nymphió. These soon formed the object of more thorough investigations (p. 106). Another French expedition carried on by Philippe Lebas in 1843–4 proved of less importance as regards Asia Minor. Partly in consequence of political affairs its results remained quite fragmentary; only parts of the work, which had been planned on a great scale, were ever published.

The event which contributed most to our knowledge of Asia Minor during these years was what may be termed the discovery of Lycia. This Alpine peninsula, projecting into the sea, on the south coast of Asia Minor, had in consequence of its mountainous character not been easily accessible. Only along its coast had it been visited, where Myra, the place where St. Paul landed, had excited interest. Older descriptions of travel, as those of Clarke, Ludwig Mayer, and Beaufort, only suggested enough of the peculiar charm of Lycian works of art to arouse a desire for more accurate knowledge. Charles Fellows, however, was hardly influenced by these, when he became the actual discoverer of Lycia. As the son of a wealthy banker without any vocation, he had early begun to travel, and since 1832 had spent several years in Italy and Greece. In the spring of 1838 he went to Smyrna,

and thence started on a three months' journey, which led him north by way of Pergamon and Troy to Constantinople, thence across country to Adalia, and then by Lycia, Caria, and Lydia, back to Smyrna. He knew nothing of the earlier travellers, wrote his journal without preconceptions, and with a tolerably practised pencil sketched what he saw. Only after his return to London, when he reported his journeys and exhibited his sketches, did he realize the great number of new things he had seen and experienced. The greatest interest was excited by the drawings from Lycia, which exhibited funereal monuments cut out of the rock or standing free. Both displayed a striking imitation in stone of wooden architecture. The decoration in reliefs of many of these tombs was also remarkable. The frieze of the so-called Harpy Tomb of Xanthos appeared of marked importance, although painfully modernized in Fellows's drawings.

This unexpected success decided Fellows to return in the autumn of 1839, as soon as his report had been printed ("Asia Minor"), with the purpose of investigating Lycia more thoroughly. He was accompanied by the draughtsman George Scharf, born in London, the son of a Bavarian artist. This second journey, during the spring of 1840, with a stay of four months in Lycia, greatly enriched our knowledge of this remote country, with its numerous and extensive ruins of cities. Its tombs, which are hewn out of the rock, at times represent wooden structures, at times the façades of Ionic temples; its reliefs are partly very ancient and partly represent a later style carried out in a distinctive character. The Harpy Tomb, in particular, which was now more correctly drawn, distinctly suggested certain works of art in which Ionian influence was conjectured, and offered in its representations an interesting problem. The copy of a wooden structure aroused anew the question of the relation of wood construction to Greek architecture.

To these may be added inscriptions in peculiar characters and a strange tongue, which offered difficult problems to the philologist. Fellows returned home with good results, and reported all in a new book "Lycia," to which some of Scharf's drawings were added. The latter's larger drawings were presented in 1844 by Fellows to the British Museum. Some plates among these clearly showed traces of colour on some of the monuments.

These new reports greatly stimulated the desire to acquire the most important sculptures of Xanthos for the British Museum. Negotiations were begun with Turkey, and a carelessly prepared expedition was set on foot, which certainly would have failed, had not Fellows offered his services, and with his knowledge of Turkish affairs surmounted the main difficulties. In January, 1842, he led the work of the sailors placed at his disposal by the British Navy. He succeeded in lowering the reliefs from the Harpy Tomb, which was eight metres high, without further injuring it. The chief find, however, was in the neighbourhood of a great substructure of freestone, where torsos of statues and four different relief friezes were found, with pediment reliefs and Ionic architectural remains, all belonging to one building, at first known as the "Ionic Monument of Victory," but which we now term the "Nereid Monument." Even the sailors acquired a lively interest in their work. They returned one day saying they had found something very strange, a relief of "the parson and his clerk." It was part of a besieged fortress, representing a warrior looking down from a tower, leaning forward, while below him another warrior was visible, thus suggesting to the sailors the church service.

Fellows and the naval officers lived in a hut, which with its flat timber roof and airy portico supported by wooden columns had exactly the appearance of an ancient Lycian structure. A visitor, then Lieutenant and later

Admiral T. A. B. Spratt, gives a graphic description of the life there: "Whilst we were there, these sculptures were daily dug out of the earth, and brought once more to view. The search for them was intensely exciting, and, in the enthusiasm of the moment, our admiration of their art was, perhaps, a little beyond their merits. As each block of marble was uncovered and the earth carefully brushed away from its surface, the form of some fair Amazon or stricken warrior, or an eastern king or a besieged castle became revealed, and gave rise to many a pleasant discussion as to the sculptor's art therein displayed, or the story in the history of the ancient Xanthians therein represented—conversations, which all who took part in them, will ever look back upon as among the most delightful in their lives. Often, after the work of the day was over and the night had closed in, when we had gathered round the log fire in the comfortable Turkish cottage which formed the headquarters of the party, we were accustomed to sally forth, torch in hand, Charles Fellows as cicerone, to cast a midnight look of admiration on some spirited battle scene or headless Venus, which had been the great prize of the morning's work." Within a short time a great deal was thus acquired; eighty-six cases were packed and sent with great difficulty to the distant coast to be placed there on a warship, and thus taken to London. But even this did not suffice. With the inadequately equipped expedition it had been impossible to remove the great block covering the Tomb of Payava (Horse Tomb). In consequence another and better-equipped expedition was sent out in 1843–4, the leadership of which Fellows again assumed. A numerous staff accompanied him, the draughtsman George Scharf, the architect Rohde Hawkins, besides others to make plaster casts of such monuments as could not well be removed. Finally twenty-seven cases were shipped containing the new finds: the two large tombs

of Payava and Merehi (Chimæra Tomb), several friezes, among which the one giving a graphic representation of cock-fights in a poultry-yard is of special interest, and lastly a number of casts of rock-reliefs in very remote places.

In the Lycian Room the British Museum acquired a department quite unique and only overshadowed by the proximity of the Elgin Marbles, and with the exception of the reliefs of Giölbashi in Vienna (Chap. VII) quite unrivalled in the world.

In more than one aspect Lycian art, the chief monuments of which date from Cyrus to the end of the fifth century, suggests problems and offers solutions to the history of Greek art. Great light is thrown here upon Ionic art in Asia Minor. Unfortunately these monuments were not exhibited in the museum in a manner corresponding to their importance; they were crowded, and objects which should have been together were separated, thus making a study of them most difficult. Moreover, nothing was done for their publication. The Museum did not devote a new volume to them in its "Ancient Marbles"; the architectural drawings of Rohde Hawkins have disappeared. Scharf's drawings remained a long time unused in the archives of the museum; no publication of the chief monument, the Nereid Tomb, appeared for thirty years, and the record then undertaken was a private enterprise.

Some public recognition was accorded to Fellows. He refused a remuneration with the words, reflecting on Lord Elgin, that he was not a dealer in stone; the reward he desired, an expression of thanks on the part of Parliament, was withheld (the distinction appeared too great), but the Queen knighted him. In May, 1845, he became Sir Charles, and in the following October there already was a Lady Fellows.

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At the same time as the Assyrian and Lycian sculptures, other valuable remains from Asia Minor reached the British Museum, evidence of a noble and pure Greek art. In the autumn of 1841, when Fellows went to Constantinople to remove some of the difficulties in connection with his Lycian plans, he found on the list of demands made by Great Britain to the Porte a wish to remove some of the reliefs built into the fortress walls of Budrun (the ancient Halicarnassos). Fellows looked upon this as "an unreasonable request," and by relinquishing it he secured acquiescence in the Lycian demands. But the plan was by no means abandoned in consequence of his action.

The objects in question were twelve relief tablets, built for decorative purposes into the fortress wall of a castle, erected by the Knights Hospitallers. These had greatly aroused the curiosity of travellers, as in all probability they were the remains of one of the wonders of the world, the neighbouring Mausoleum. Even to enter a Turkish fortress was most difficult (particularly one as strongly fortified as Budrun), so that taking stones out of its walls appeared almost an impossibility. But the word *impossible* did not exist in the vocabulary of the energetic representative of Great Britain at the Sublime Porte, the same Sir Stratford Canning who had helped Layard in his undertaking at Nimrud (p. 89). He succeeded in overcoming all difficulties after three years, and received in 1846 a firman giving him permission to remove the slabs. This was, of course, carried out at once. The work lasted a month, and in the same year the remains of the Amazon frieze of the Mausoleum were added to the Lycian treasures in the British Museum. This addition created great interest. So when shortly after this Frau Sibylla Mertens-Schaffhausen, a great lover of art, discovered a well-preserved similar slab in the summer-house of the Villa d'Negro at Genoa, and had plaster

copies of it taken, the officials of the British Museum recognized without difficulty a piece of the same frieze, which may have been taken thither centuries ago by a Knight of St. John. The prospect of recovering more of these scattered pieces must have appeared most enticing.

This thought fascinated one of the officials at the museum, Charles Thomas Newton, then thirty years old, a man combining great learning and a keen sense for art with a quiet, persistent energy. He studied Halicarnassos thoroughly with a view of definitely establishing the site of the old Tomb of Mausolos, and at last his aim appeared within reach. He arranged to be sent in 1852 to Mytilene as vice-consul, and from there he also acted temporarily as consul in Rhodes. According to the directions of the Foreign Office seven years of diplomatic service in the Levant were to be combined with the task of contributing new acquisitions to the British Museum. Already on his outward journey Newton's hopes were raised on seeing a beautiful Amazon in the small museum at Constantinople; it obviously belonged to the frieze of the Mausoleum. Some other fragments were discovered walled into houses in Rhodes. But it was not till 1855 that Newton entered for the first time the castle of Budrun. A pair of large lions caught his eye at once, built into the walls on the side of the sea, and evidently belonging to the Mausoleum. The time for action had now come. The ambassador, who had become Lord Stratford de Redcliffe, acquiesced willingly in Newton's undertakings, which were a continuation of his own former plans. The fortunate turn of events in the Crimean War (Sevastopol had fallen) helped to second the demands of the British ambassador. In the meantime Newton had uncovered in Constantinople the serpent column on the Atmeidan, the remains of a Panhellenic offering from the spoils of Platæa. Two German

scholars living in Constantinople, Otto Frick and P. A. Déthier, were thus enabled to discover and decipher the dedicatory inscription thereon.

While the firman of the Porte was delayed, Newton occupied his time in a search for the Mausoleum, and finally decided on exactly the same spot which had been fixed upon thirty years previously by the English architect T. L. Donaldson. But only on New Year's Day, 1857, was the ground first broken. Nine months of laborious and exciting work brought forth a number of precious marbles, among them innumerable fragments, out of which the statues of Mausolos and Artemisia were reconstructed; further a colossal torso of a rider dressed as a Persian; four slabs of the east frieze belonging to the side where Scopas worked, three of these fitted to one another. The art of Scopas, Timotheos, Leochares, and Bryaxis appeared here far more brilliantly than one would have anticipated from the friezes already in London. One of the chief works of Greek plastic art of the middle of the fourth century was regained in so far as we may hope to gain anything of the kind; and eventually through Newton's energy all the fragments were gathered into the British Museum, including those in Genoa, Constantinople, and Rhodes. So many and important remains had been found of this marvellous Ionic structure, that the architect P. Popplewell Pullan, who had in the meantime arrived, tried to undertake a reconstruction, a task for which he was hardly qualified.

But even these great results did not satisfy Newton. The following winter he went over to Cnidos and uncovered, in the deserted ruins of this old and prosperous metropolis, probably for the first time with any degree of accuracy, the plan of a Greek city. The greatest treasure, however, was the marvellous statue of the seated Demeter, which adequately represents the brilliant Praxitelean period of Attic art. To this was added the

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DEMETER

BRITISH MUSEUM

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following summer, by a fortunate accident, the discovery of the Doric monument remotely situated on the coast overlooking the battlefield where in 394 Konon overcame the Lacedæmonian fleet. The huge crouching lion of Pentelic marble, which had crowned the monument, was a very welcome find, but the embarking of so huge a block occupied a full month. As a final achievement Newton took all the seated statues which had lined the Processional Way on the south of Miletos from the harbour of Panormos to the sanctuary of Apollo Philesios, the Didymaion. Ten seated statues and two lions, by their position suggesting Egyptian temple avenues, testified to the glorious period of Miletos before the Ionian Revolt, the time when the capital of Ionia maintained a close connection with the land of the Nile.

After having acted as consul in Rome for a year, Newton returned in 1861 to the British Museum and assumed the management of its Greek and Roman antiquities. He could claim that in consequence of his work in Asia Minor the department of sculpture had been more extensively enriched than by any other undertaking since the times of Lord Elgin. Nor did Newton allow any opportunity for acquiring new treasures to escape. The following example clearly illustrates this. In the year 1862 a statue, shattered into many fragments, had been found in Vaison (Vaucluse), the ancient Vasio. On the advice of an expert the owner applied to the Museum in Paris in October, 1868, and when refused there offered it to the British Museum, with the result that Newton merely answered he would inspect it at his earliest opportunity. However, nothing happened, and the owner renewed his offer again to both Museums, 25 July, 1869, this time enclosing a small photograph.

Paris again declined on 31 July; but in consequence of the importance of the statue Newton announced at

once his approaching visit. He writes: "I took my portmanteau and went over to France." The purchase was concluded in a few hours, and on 11 August Newton was able to write to the owner that the British Museum was willing to pay 25,000 fr. (£1000). The subject of this rapid purchase proved to be the Polykleitan Diadumenos, with which we first became acquainted in this copy. The gradual purchases of the Farnese collection in Rome, of the Blacas collection, and the chief objects in the Pourtalès collection in Paris, together with two Castellani collections in Rome, at a total expense of £100,000, not only increased this department in the museum, but added greatly to the collections of gold, gems, bronzes, and vases. Newton also promoted foreign excavations, or secured their results for the museum. He secured in 1859 from Biliotti and Salzmann in Rhodes the valuable collection of antique vases, which they had excavated on the ancient site of Kameiros. The naval officers R. Murdoch Smith and E. A. Porcher had with great success, in 1860, explored the district of ancient Cyrene, and found a number of Hellenistic and Roman sculptures, and in the Cyrenaic town of Benghazi, the British consul George Dennis, to whom we owe one of the most delightful books on Etruria, had been actively collecting for the museum. The architect Pullan continued his researches on different temples on the west coast of Asia Minor (Teos and Smintheion), and uncovered in 1866 a number of reliefs at Priene, at first incorrectly attributed to the frieze of the Temple of Athene Polias, dedicated by Alexander the Great. They actually belong to a later decoration from within the temple. These fragments also came to the British Museum. But the most important accessions were the result of another enterprise. As one of the seven wonders of the ancient world, the Temple of Artemis at Ephesos ranked beside the Mausoleum. It had been rebuilt in great

splendour after the fire of Herostratos in 356. In the marshy soil all traces of the temple had been lost, even its exact locality was uncertain. The architect J. T. Wood was sent in 1863 by the British Museum and the Society of Dilettanti in search of it, and after many years of weary effort he located it in 1869 below the hill of Ayasoluk, exactly where the geographer Heinrich Kiepert had indicated it thirty years earlier. There followed five years of most laborious investigations (to 1874) in the swamp six metres below the present surface. It may have been partly in consequence of these unfavourable circumstances, partly of inadequate preparations, but unhappily there can be no question of the fact that the excavations have only partly attained their object, and essentially bear the stamp of careless working. The mighty pieces of architecture covered with reliefs, which have reached the British Museum, are indeed of the greatest importance. The drums of columns with most beautiful sculptured reliefs, remains of the *columnæ cælatæ* mentioned by Pliny, and, above all, the remains of columns with similar decorations of an earlier temple, of the time of Crœsus, justified the great admiration they aroused. This decoration on columns was novel, and the comparison offered by the consummate art of the fourth century with the archaic of the sixth century was most instructive. But the effort of raising these huge pieces of sculpture from such a depth led to an utter disregard of the plan of the temple as a whole, a problem which was never correctly solved. Since then this site—British property—has remained a desolate waste. A recent visitor expressed himself thus: "What does it look like to-day? One shudders at the desolate heap of rubbish which meets the eye. It fills a ditch several hundred yards long, a picture of utter neglect. Better to have left it covered than create such damage." This

decidedly is going too far, in view of what we have acquired by Wood's labour and the gain these treasures have been to the British Museum. England must have felt in honour bound to resume these excavations and carry them out with all the technical skill acquired of late years. It is therefore most gratifying that the British Museum, under the efficient and energetic guidance of Cecil Smith, has resumed this laborious task so long neglected. May the results bring the desired solutions.

The enterprises undertaken and promoted by Newton have the same significance for the art of the fourth century as the older discoveries of Ægina and Bassæ and the acquisition of the sculptures of Pericles have for the fifth century. The statues of the Didymaion and the old remains of columns of the Artemision at Ephesos, together with the Lycian Harpy Tomb, date back to the sixth century. In consequence of the energy of Fellows and Newton the British Museum has triumphantly retained its old position as the treasure-house of the most remarkable collection of Greek sculpture.

Newton's activity becomes the more significant if compared with the quiet at the British Museum, in his department, since he left in 1888, and only of late has some activity again been shown. Newton was at the same time the organizer of scientific archæology in England; in former times the study of numismatics had been carried on there almost exclusively, although in a very creditable manner, by Poole, Head, and their colleagues. Newton was one of the founders of the Society for the Promotion of Hellenic Studies in 1879, and of the Egyptian Exploration Fund in 1882; and took part in establishing the Archæological School in Athens in 1885. He exercised his office as curator of the treasures at the British Museum with the most magnanimous generosity to all, including foreigners, a generosity which should be the model for all, but unfortunately

is not always found, even in some departments of the British Museum.

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From another source researches were undertaken about this time in the interior of Asia Minor. Napoleon III's interest in the history of Cæsar helped to advance a number of scientific enterprises. Thus in 1861 Georges Perrot, one of the most distinguished students of the French School in Athens, was placed at the head of a "Galatian expedition." Its main object was the complete excavation and reading of the account of his government drawn up by the Emperor Augustus, which both in Latin and Greek versions covered the walls of the Temple of Augustus and Roma at Ancyra (now Angora). The architect E. Guillaume and the photographer Jules Delbet accompanied Perrot. Busbeke had discovered and copied the Latin text of the "Monumentum Ancyranum" more than three hundred years before, and later travellers had partly copied the Greek. Large fragments of this very important record were now uncovered. But of greater importance for archæology was the expedition undertaken by Perrot and his companions into the neighbouring Cappadocia to re-examine the rock-reliefs at Boghas-Koï which Texier had seen and noted. A strange un-Greek art was disclosed here, rather suggestive of Mesopotamian designs, but at the same time independent. In Northern Asia Minor these rock-reliefs frequently appear as far as the neighbourhood of Smyrna where the "Karabel" (black stone) of Nymphio, a warrior image, had already attracted the attention of Texier. But quite different again is the so-called Niobe on the Sipylos, an old-Phrygian image of Cybele. In these rock-reliefs we come in contact with the art of a very ancient Asian people, which apparently developed under the influence of the Hittites of Northern Syria. But it remained

doubtful whether we were to suppose, as many have done since the publication of William Wright's " Empire of the Hittites " in 1884, that the political rule of this nation, or merely its civilizing influence, extended over the whole of Asia Minor. Excavations carried on in the autumn of 1906 by Hugo Winckler (Berlin) have demonstrated the fact that Boghas-Koï was indeed the capital of the Empire of the Hittites. Clay tablets, forming an enormous body of archives, in Hittite and Babylonian characters, promise some solution for the problems of the prehistoric times of Asia Minor. Remains of walls and of sculpture (lions) may attract further excavators. Other plans of Napoleon III included a Macedonian expedition, with which Léon Heuzey, a colleague of Perrot's, and the architect Honoré Daumet were commissioned by the emperor. The study of the battlefields of Pharsalos, of Philippi, and of Pydna was its main object. But Heuzey with great thoroughness extended his task so as to include a number of monuments in Thrace as well as different architectural sites. Among the latter were noted the remains of an extensive villa, until then unknown, of Hellenistic times, near Palatitza in Southern Macedonia. The co-operation of the architect proved most efficient. A grave relief of two women from Pharsalos proved of interest in consequence of its archaic character. Excellent publications appeared showing the results of both expeditions.

Mention must be made here of the journey to Thasos made by the Paris academician E. Miller, in 1864. Although it was undertaken chiefly for the sake of inscriptions, excavations enriched the Louvre with two choice pre-Attic works of Ionic art : the frieze of an altar dedicated to the Nymphs and Apollo of delicate archaic style, nearly related to the Harpy Tomb, and the extraordinarily well-finished grave relief of Philis. This shows in a marked degree the " *pastoso* " style, as repre-

sented by the relief of Pharsalos, in which Brunn seeks to find the peculiarities of the relief work of Northern Greece. It is in any case a peculiarly skilful variety of the Ionic style.

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The most northern territory opened during this period to our science is the land of the Scythians in Southern Russia. Upon archæological explorations there the Russian Government expended great sums. These aimed chiefly at uncovering the graves of Scythian kings or chieftains, forming artificial hills in the Crimea near Kertch or beyond the straits in the peninsula of Taman or again near the Dnieper. The French emigrant Paul Dulrux, who had entered the Russian service and took a keen interest in antiquities, opened in 1830 the Kul Oba (hill of ashes) near Kertch, and disclosed for the first time the wealth of gold treasures in these tombs of rulers. Below the great earth-hill was found hidden a sepulchral chamber of masonry, which had a wooden ceiling after the fashion of Scythian houses. The body of the chief and the walls of the tomb showed traces of garments decorated with gold; the rich decorations of the grave were completed by a gold shield and a gold scabbard (with the name of the artist Pornacho inscribed on it), both with reliefs, and a large amphora of electron (a mixture of silver and gold). The kings' tombs on the Dnieper were only examined considerably later by the Russian archæological commission under the scientific guidance of Ludolf Stephani. In accordance with the literary evidence of Herodotus on the tombs of the Scythian rulers, which in the main proved correct, some of the largest hills were opened, among a vast number lying between Ekaterinoslav and Alexandrovsk on the right bank of the river.

On opening the "Meadow Tomb" near the village of

Alexandropol in 1862–3 it was found that the grave had been opened and robbed at some former time. The same was found to be the case in the large hill of Kurgan near Nikopol in 1862–3, although the robber had here been overtaken by disaster, for in a passage was found a body with a lamp near the treasures. The gold decorations of a broad quiver (gorytos) and a scabbard as well as a silver amphora, all decorated with reliefs of Greek workmanship, were the main objects, but besides these were many trinkets of gold. In the sepulchral chamber of the wife of the ruler a painted wooden coffin presented an artistic novelty.

Where did this art originate? In the tombs of the Crimea numerous Attic vases, many of great beauty, testify to the active commercial intercourse existing between Athens and the land of the Scythians. An Athenian vase painter, Xenophantos, who apparently had settled in Pantikapaion (Kertch), also suggests a transference of Attic art in this manner. The subject of his painting, a somewhat fantastically elaborated "Hunt of Darius," indicates the taste of a rather barbaric public. One felt inclined to attribute the main objects found in the graves to the same influence, the great and small vessels in gold, silver, and electron, and the splendid gold trinkets. Greek art forms had here been combined with the national Scythian objects, and with surprising accuracy the characteristic life of the ancient Cossacks had been grasped and rendered. We see the Scythians at war; they talk together, they stretch their bows, a painful dental operation is rendered or a wounded leg bandaged. Again we find them on the steppes engaged in leashing together or breaking in their horses. Every movement is copied from life. The Greek objects besides these show mannerism and a somewhat lifeless style, and indicate at times misconceptions, but, on the other hand, it is true they present remarkably fine and pure decorative

effects and images of animals. An accurate copy of the head of the Parthenos on gold plaques clearly indicates a connection with Athens, and it is probable that these objects of the fifth and fourth centuries may have been imported from Attica. But a mixed Attic-Scythian art was represented, and was largely practised in the land of the Scythians either by Greeks or by Scythians who had had their training in Greece (e.g. Pornacho). After Athens, Ionia may also claim a share in the beauty of this splendid art, a beauty which forgers have tried to imitate. The "Tiara of Saitaphaines" is still in the memory of all. These great treasures form the pride of the collection of antiquities at the Hermitage in St. Petersburg. As regards the golden jewels, no other collection can compete with it. The great publication, "Antiquités du Bosphore Cimmérien," issued by imperial munificence, and the reports of the Archæological Commission of St. Petersburg have served to make these treasures known in a worthy manner.

VI

GREEK SANCTUARIES

THE flood of archæological discoveries continued almost without intermission to the beginning of the sixties, finally with Newton's discoveries in Asia Minor attaining a height that recalled the beginning of the century. A pause now intervened, interrupted only now and then by single discoveries.

In 1862 Ernst Curtius and the architects Karl Bötticher and Heinrich Strack undertook a journey to Athens with the object of studying its antiquities. Curtius devoted his attention to the Pnyx and its topographical problems. Bötticher directed his studies to the buildings on the Acropolis, while Strack began excavating the completely buried Theatre of Dionysos.

In the following spring there was discovered near Rome, at Prima Porta, the ancient Saxa Rubra, where Constantine gained dominion of the world, the villa of the Empress Livia, with landscape paintings on the walls and a statue of her consort, the most authentic portrait of Augustus, which, in consequence of the courtly symbolism displayed on the cuirass and the vivid traces of colour, excited the greatest interest. Rome also offered something new of the times of Augustus. In 1861 Napoleon III secured from the dethroned royal family of Naples the Villa Farnese on the Palatine, and he commissioned the Roman architect Pietro Rosa with the excavation of the imperial palaces as far as they lay

within its limits. These excavations proved of the greatest importance for our knowledge of the Palatine buildings, of the Flavian Palace in particular. A most gratifying discovery was made just before the close (1869) by the uncovering of a part of the house of Livia or of Germanicus, situated lower and in consequence better preserved. Three vaulted chambers have retained their mural paintings, more delicate and lovely and of greater originality than anything Herculaneum or Pompeii can show. The great significance of this discovery was only revealed later on.

Thus the seventh decade was not wholly lacking in discoveries—apart from those mentioned at the end of the last chapter, which were, for the most part, only published later—but yet a check was perceptible. Hence the question arose: What had so far been attained? How far was our archæological material enriched in consequence of these numerous discoveries? And what had science gained thereby?

At the beginning of the century archæology had worked almost entirely with Roman material. Now nearly all the countries surrounding the Mediterranean—the entire Greek region from Sicily to Asia Minor—were included in our consideration, and rendered available for scientific examination by means of travels, investigations, and excavations. Pompeii and Etruria had been added; and Egypt and Assyria had extended our horizon beyond the classical lands.

Greek art, which now became known not only in copies, but in its original forms, occupied the central point of scientific investigation, and the outlines of its development could now be clearly traced. A faint ray of light had been thrown by Mycenæ into prehistoric times, the contents of the Regulini-Galassi tomb (p. 70) helped to illustrate Homeric art, the rock-reliefs of Asia Minor, to which belonged the supposed Niobe of Sipylos mentioned

by Homer (p. 105), belonged likewise to prehistoric times. True Greek art, on the other hand, was supposed to begin only about 600, when the names of Greek artists first appear. But from that period until the time of Alexander the Great, three centuries of Greek art could clearly be traced.

Doric architecture was represented by numerous temples both in the west (Sicily and Pæstum) and in Greece proper. Examples of the Ionic style were less numerous, and of early times in particular none were known, so that the Temple of Athene at Priene, of the time of Alexander the Great, was regarded as the normal type of temple. Nevertheless, these materials sufficed for the gifted Gottfried Semper to establish the fundamental points of the development of architecture, and to distinguish their chief periods; while Karl Bötticher, a logical and systematic thinker, but lacking in the historic sense, reconstructed by a brilliant effort of abstraction the Doric temple before our eyes in its entirety, in the strict co-ordination of its parts and in its relation to the ritual conditions.

It is entirely owing to the discovery of vases that we had gained any definite knowledge of Greek painting. These paintings on vases have been compared to the delicate rays of the moon, as contrasted with the bright sunlight of the great Greek painting, for ever lost to us. It is true these products of a handicraft can never replace those masterpieces, but the firm hand and the delicate perception in these modest works breathe a more truly Greek spirit than the late work at Herculaneum and Pompeii, and they place us more closely in touch with the original artist than any description in ancient literature. Thus they offered suggestions to the imagination in helping to reconstruct a picture of the great beauty lost. And artists with a classical training like the brothers Riepenhausen, united with so sympathetic a

master in science as Friedrich Gottlieb Welcker, reconstructed in drawings the mural paintings at Delphi of the great Polygnotos.

Etruscan mural pictures gave us some faint indication of the progress of style of Greek painting. The great mosaic of Alexander found at Pompeii indicated for the first time, although in the coarser material of mosaic, the pictorial treatment of historical events in the grand style. Furthermore, the constant finds of Pompeian paintings greatly extended our knowledge of the mythological treatment of subjects.

In plastic art the gain was greater. The oldest metopes of Selinus, and perhaps, too, the frieze of Assos, seemed to take us farther back than the sixth century, and indicated, if not a primitive, at least a very archaic art. The heavily proportioned statues from the Sacred Way at Didymaion, the archaic reliefs on the drums of the Artemision at Ephesos, the frieze of the Lycian Harpy Tomb, in which, for all its limitations, an awakening charm is already faintly seen, all these illustrated the art of the sixth century in different directions. The distinction formerly made, in architecture, between the Doric and Ionic styles now, in consequence of these new impressions, began to be applied to sculpture as well. Such was the distinction in the art of the fifth century between the Æginetan, the few Olympian, and the later Selinuntine sculptures on the one hand—and the Athenian and Phigalian masterpieces on the other; we were only beginning to know plastic art of the "lofty style." In a similar manner the finds at Halicarnassos, at Ephesos, at Cnidos helped to illustrate the art of sculpture, which had been transplanted to Asia Minor. The Apoxyomenos and the Sophocles completed the chain. New points had been gained by which comparative study was promoted, which enriched the picture of the development of sculpture unfolding before our eyes. A whole series of "Histories

of Greek Sculpture " began, either awakening or strengthening prejudices, as if the history of Greek art were confined to plastic art. This, in consequence, came so much into the foreground, that the sense of the indissoluble union of the three arts was gradually lost.

The series of new discoveries ended, as has been said, with the time of Alexander the Great. Doubts were expressed constantly in regard to the Venus of Melos, whether she had not better be placed in the fourth or even in the fifth century; for she seemed too good for the Hellenistic period. The less we knew of this period the less ability we felt inclined to ascribe to it. For here a great gap remained in our knowledge, all the more keenly felt as literature offered next to no assistance. Credit must be given to Wolfgang Helbig for having started new investigations; he had studied at the University of Bonn as a contemporary of Ritschl and Jahn. The catalogues he undertook in 1868 of the mural paintings of Herculaneum and Pompeii led him to further investigations, which he published fully in 1873. The main point upon which he laid stress was that these paintings, although executed in Roman times, can with rare exceptions be traced to Hellenistic art, and this they reproduce in more or less weakened or distorted copies. Roman art, he maintained, differed from the above, and frequently was coarsely realistic. To prove his results Helbig undertook a long series of single investigations, which may be designated as the first attempt at a History of the Civilization of the Hellenistic age. With this a new basis had been established for our knowledge of late Greek art and of painting in particular. The general view at first obscured the differences, but the way had been prepared for assigning new discoveries, which soon followed to their proper sphere. On the other hand, Roman art had to yield " Pompeian painting " to Hellenism, and had to be prepared for further restrictions.

A new generation undertook the task of scientifically working over these new discoveries. In Germany three leading representatives of the older generation were called away during the sixties: Gerhard, Welcker, and Jahn. Otfried Müller had already died in Greece in 1840. Heinrich Brunn remained active at the Archæological Institute in Rome, training his younger colleagues, until called to Munich in 1865, when he surrendered his Roman post to Helbig. For the constantly growing number of chairs of Archæology founded at the German universities, it was possible to find able young men who had gained their archæological training at the Institute. This thorough preparation of the teacher and the extended teaching of archæology, even at the smaller German universities, gave German science a preponderance for some time, as was even admitted by foreigners. Many foreigners, particularly Greeks, came to the German universities. The French School at Athens under Amédée Daveluy and Émile Burnouf remained very quiet; only in Paris was there any archæological activity in France. England had not yet organized the study of archæology; Cambridge only later established the first chair. Italy took part only in isolated cases, and then chiefly in connection with the Archæological Institute; gradually, however, the first indications appeared of the prehistoric researches which developed quite apart from and independently of classical archæology, rather in connection with natural science and the history of civilization (Chap. VIII). The interest of the Greeks was almost entirely absorbed by Epigraphy and Numismatics.

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The new trend of archæological science affected excavations likewise. What had been discovered up to the time, apart from Pompeii, were single objects or single structures; even Newton's undertaking bore this char-

acter, except at Cnidos, where the ground-plan of the entire city was uncovered. Frequently the discoveries were brought about by accident, as the burial sites in Southern Etruria. For the future it became desirable to undertake extensive plans only after careful and scientific preparations had been made, and to carry them out exhaustively. The co-operation of well-trained architects and those familiar with ancient architecture was needed; for many of the past undertakings showed a great lack of these. Alexander Conze was the first to recognize and to remedy this defect. Conze, a pupil of Gerhard, had, after finishing his studies, in 1856–7, undertaken a voyage to the most northern islands of the Archipelago (Samothrace, Imbros, Lemnos, and Thasos) and to Lesbos, with a view of filling a gap in the Ægean cruise of Ludwig Ross. This journey was most eventful, though excavations were not undertaken; indeed, such an idea was still rare. From the castle hill of Mytilene he looked over to the shores of Asia Minor, where, the Crimean War being now over, Turkish soldiers were roving about in bands, and making the country inaccessible for scientific research, particularly by a single individual. After having published his description of the islands, Conze went to Rome and met Newton. Newton was just then, in 1859, exhibiting in the Palazzo Caffarelli, occupied by the Prussian Legation, his drawings and photographs of the Mausoleum, and his other discoveries of Asia Minor. He then had succeeded where Conze had believed it impossible. The importance of what had been acquired, the conversations with the happy discoverer, the remembrance of the many sites he had to leave unexplored, all this combined to leave Conze no peace.

After an extensive journey over Greece—Conze and the writer of this book were the first to receive travelling studentships of the Archæological Institute—and years

spent in teaching at Göttingen and Halle, Conze was called in 1869 to the University of Vienna, where greater prospects were opened to him. The study of archæology was completely neglected in Austria ; had not Metternich in his day forbidden membership in the Archæological Institute, of which he himself was *Ehrenpräsident* (*président en l'air*, as he jestingly said) ? Besides organizing the archæological studies at the university, and travelling in Austria to view its Roman remains, Conze undertook the task of arousing a wider interest in archæological questions.

In the year 1872, for instance, he gave a lecture on " two Greek islands, Syra and Samothrace." Syra, as the centre in the Cyclades, inherited the once important trade of the neighbouring island of Delos ; while the sanctity of the latter had during the last fifty years passed over to Tenos, with its Evangelistria. So the remote Samothrace with its mystery cult had yielded its place to the convents of Athos, the " sacred mountain " of Oriental Christianity. Both islands were within the sphere of Austrian trade and Austrian politics. In alluding to this Conze closed with the following words : " It is to be hoped the ban will soon be raised which closes this remarkable and little-known island, with its important monuments. The authoritative word may be uttered any day." The demand was not in vain. The Government on its own initiative requested Conze to supply a scheme for excavations, which he was eventually commissioned to execute with two architects from Vienna, the painstaking Alois Hauser and the gifted George Niemann of Hanover. Thus the important co-operation of architects was secured. To these a photographer was added.

Newton had already made use of photography, although it was not developed as it is to-day ; but it proved indispensable for all future undertakings. A man-of-war was placed by the Government at their disposal, so that in

May and June, 1873, excavations were carried on in Samothrace for six weeks. These were so successful that in the autumn of 1875 a second expedition was undertaken for two months. Besides Conze and Hauser, Otto Benndorf, then of Prague, was among the workers.

Samothrace is a rough, rocky island, somewhat remote and rarely visited by ships. On it are very few level plains, even of moderate extent. Since Conze's visit in 1863 the French vice-consul Champoiseau had excavated and collected two hundred fragments of a large female statue at Kaballa, a city situated opposite, and these had been sent to Paris. A beautiful statue of Nike had from these fragments been pieced together, and at first, strange to say, it was classed as " a mediocre decorative figure of a late period." Wilhelm Fröhner in 1869 was the first to recognize its great worth. The statue had been found not far from the spot where the Austrian expedition had begun work. Beyond the ancient city walls of old Samothrace lay the ruins of the Sanctuaries of the Mysteries, situated upon two irregular tongues of land between deeply cut river-beds. During the excavations in 1873 the chief finds were two buildings of unusual plan. The " Marble Temple " of the third century B.C. seemed to anticipate in a singular manner with its transept, its raised " choir " and rounded apse the ground-plan of the Christian Basilica. Within the " choir " a deep pit, going down to the rock, suggested the bloody sacrifices of the mysteries and initiative rites. Not less peculiar was the moderately large round structure, characterized as of two storeys and closed all around, apparently a meeting-place of the initiated. Fragments of a dedicatory inscription indicated Arsinoe, the daughter of the first Ptolemy and wife of King Lysimachos (d. 281) as its foundress. The finding in 1875 of a gateway, founded by Ptolemy II, completed this group of buildings, which dated from the times of the early Ptolemies.

Near the Marble Temple another building appeared, an older and far simpler Temple of the Mysteries of the fourth century, with a similar pit for sacrifices, presumably the temple for which, according to an ancient authority, Scopas worked. Finally there ran along the side of the place of the Mysteries a long colonnade, the first example of what was soon to be recognized as a regular feature of all Hellenistic groups of buildings.

Although single discoveries of the excavations were important, it was of far greater significance that here an entire ground-plan, the complex of a complete group of buildings devoted to the mysteries, had been uncovered. All these, with the exception of the older temple, belonged to the first half of the third century, and were probably a new foundation by different members of the Ptolemaic house. This gave us our first knowledge of Hellenistic architecture. A number of distinctive single features were observed, and the picturesque arrangement of the entire plan suggested in a vivid manner the Pompeian landscape paintings, and thus illustrated an important feature of Hellenistic art. If the yield of sculpture had been insignificant—the remains of the pediment figures of the Marble Temple indicated a facile decorative talent —the neighbouring limekilns offered the sad solution. Another discovery compensated for this, and to Benndorf in particular we owe its scientific explanation. Near the end of the long colonnade on the site where Champoiseau had found the fragments of the statue an eager search was continued, and besides some further fragments of the statue, many blocks of the base were found, which when fitted together formed the prow of a warship. Thus the Nike had stood on a ship, exactly as after the decisive naval victory off the Cyprian Salamis in 306—which had shattered the empire of Alexander into four independent kingdoms—Demetrios Poliorketes had a Nike, standing on a ship, stamped on his coins. So exactly do they

correspond that one is forced to conclude that the Nike of Samothrace was dedicated by Demetrios after his victory. Thus a most important work of art was recovered from early Hellenistic times, as spirited in composition as it is masterly in the execution of the superb drapery. The discoverers informed Champoiseau of their find, and all the fragments were transported to Paris. The statue was completed and placed on the prow of the ship. On the occasion of the Czar's visit in 1896 it was placed in position above the *escalier Daru ;* a position offering the most brilliant decorative effect, even if not allowing any detailed study of this superb work.

A complete record was published of the Austrian excavations. Photography was used here for the first time, not only at the excavations, but for the publication. Newton still had lithographs made of his photographs ; here the latter themselves were incorporated in the book. Another innovation was supplied by the architects. Whereas, with few exceptions in the past and frequently even now, the architects deem it sufficient to present reconstructions of the buildings with characteristic details, here all the important blocks were accurately figured with their technical peculiarities. Only by such careful and conscientious proceeding does it become possible to test the reconstructions and to study the peculiarities of different periods and different schools of architecture, on the technical as well as on the formal side. The important position accorded to the architects proved a great gain, and indicated the method to be observed in future undertakings.

The Sanctuary of Samothrace had been dedicated to the "great gods" the Kabeiri and their mysteries. Mention may here be made of another smaller sanctuary of the Kabeiri uncovered west of Thebes, by the German Archæological Institute of Athens, 1887–8. Upon careful

examination several different building periods could here be distinguished. Of the oldest temple, dating back to the sixth century, only a part of an apse remained, recalling the one at Samothrace. The second, a Hellenistic temple, showed a double apartment instead of a cella, as in the temples at Selinus; in the inner apartment was found the broad basis of the statues of the gods. Behind the temple lay a walled court containing a sacrificial pit; this was not accessible from the temple, but had, like the transept of the temple at Samothrace, doors on two sides. Again it became evident that parts of a sanctuary may be "hypæthral," that is, open to the sky (p. 37). The latest remodelling of Roman times on the whole preserved the earlier plans, only changing the cella and entrance hall in the customary manner. The great mass of potsherds testified to the popularity of the cult; their rather coarse and humorous style of painting formed a characteristic contrast to the contemporary Attic painting. These representations of Kabeiros and his son with Bacchic surroundings illustrate an interesting chapter in mythology.

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While the Austrians were gathering laurels in Samothrace, the French School at Athens undertook a similar task: to explore Delos, the birthplace of Apollo, the smallest of the Cyclades, but in consequence of the cult of the god, and later as the centre of Greek maritime trade, always of the greatest importance. The island with bare Mount Kynthos towering above it, presented a picture of the most abject desolation, not the natural barrenness of Samothrace, but the desolation following devastation by human hands, and the curse which Christianity early laid on the sacred island of the Hellenes. Not a tree, not a house, nor even a little church, only a lonely veteran who acted as guardian,

while a few goats and pigs foraged in the morass of the "Sacred Lake." Thus I found the island in 1860. The site of the sanctuary was known by a heap of rubbish, the town indicated by the theatre on the slope of the hillside, and higher up the mountain a short rock passage paved with large slabs offered a problem to be solved.

Stuart and Revett had made an imperfect plan of the site and drawings of the remains of the Doric hall of Philip V, of the end of the third century, while the Expédition du Morée had not added much. Albert Lebègue, a member of the French School, recognized in 1873 in the rock grotto in all probability an extremely ancient sanctuary of Apollo. But the work still awaited a competent hand.

This was effected in 1876 when the energetic Albert Dumont assumed the leadership of the French School, and in a friendly way competed with the recently founded German Archæological Institute. He gave a stimulus to greater efforts and higher aims. He fixed his eye at once upon Delos, and with sound judgment chose among the many excellent pupils of the School in Athens, Théophile Homolle, then only twenty-eight years old, to go to Delos in 1876 and reconnoitre. Homolle returned with definite plans. He began his first campaign in May, 1877, with the modest sum of 1300 francs (£52) placed at the disposal of the School for excavation purposes by the Society of French Architects. The Sanctuary of the Delian Apollo was first uncovered. Work continued at the Temple of Apollo for three years, 1877–9, and during that time the entire precincts were excavated. Of foremost importance were the very numerous inscriptions, some of these instructing us in regard to matters of art, while next may be mentioned a great number of marble statues, throwing new light on the relation of the Ionic sculpture of the sixth century to the rough-seated statues of Miletos (p. 101). The statue

dedicated by Nikandra of Naxos looks as if hewn out of a log; it represents the draped figure in its most primitive form; the flying Nike of Archermos, or fashioned on his model, shows a daring flight of the imagination still hampered on the formal side. Other female statues indicate the gradual advance in posture and drapery. Besides these archaic works, fragments of later groups were not lacking. In these Furtwängler soon (1882) recognized the *akroteria* of the Temple of Apollo, built about the time of the Peloponnesian war.

During these first three years Homolle had no assistance from any architect. In consequence not much attention had been paid to architecture, and no general ground-plan was made of the excavations. Radet gives the following description: "At the end of 1879 the uncovered foundation wall extended over the country in disconnected masses, intersected by a chaos of ditches and heaps of rubbish. It was impossible to recognize their form, extent, or connection."

In the meantime, not only the work on Samothrace, but, above all, the excavations at Olympia (p. 125) had demonstrated the necessity of architectural assistance at such undertakings. Thereupon Homolle resumed his work in 1880, accompanied by the able architect Henri Paul Nénot, who later built the new Sorbonne. From their newly gained starting-point they tried to follow the surrounding walls of the sacred precinct, and came upon numerous buildings crowded together within it: sanctuaries, treasuries, the peculiar so-called "Hall of the Bulls," of all of which Nénot published plans and sketches. He also made the first plan of the previous excavations. We do not know why this path, so happily begun, was soon abandoned. Homolle continued his investigations twice more in 1885 and in 1888, the second time in conjunction with the architect Demierre. For the rest, the excavations were entrusted by the new

director, the distinguished epigraphist Paul Foucart, to the youthful and keen pupils of the School, who, however, were hardly sufficiently trained for the task. Thus there were actively engaged in 1881 Amédée Hauvette, in 1882 Salomon Reinach, in 1883 Pierre Paris, in 1886 Gustave Fougères, in 1889 Georges Doublet, in 1892 Joseph Chamonard, in 1893 with Édouard Ardaillon, in 1894 the latter and Louis Couve. Not only did they all add to our knowledge of the sacred precinct and its complex plan of the temples for the Roman worshippers of Mercury and the Asiatics who adored Serapis, but also to that of the city with its theatre and many public and private buildings, and finally the harbour with its quays, warehouses, and market-places. Thus, with the help of inscriptions both the sacred and secular Delos appear tolerably clear before our eyes.

The acute Couve, who died young, was the happy discoverer of the Polykleitan Diadumenos, found in excellent preservation. Owing to the constant change in the leadership there was no fixed plan of the excavation, and this frequently led to a repeated working over of the same ground. Though we possess a general survey of the site by Nénot, and an archæological map of the island by Ardaillon and Convert, we have no architectural pictures of Delos with all its structures, which would be most instructive in regard to Hellenistic architecture. Whether it still can be produced remains very doubtful. Let us therefore be grateful to the engineer Henri Convert for plans of a number of private dwellings which had been uncovered by Couve. These houses date from the time between the end of the war against Perseus (168) and the double destruction of Delos by Mithridates' general Archelaos in 88 and by pirates in 69; it was the time when the island enjoyed its greatest commercial activity, when Greeks, Syrians, Egyptians, and Romans all met as competitors. Therefore in the plans of houses we find

Greek and Roman types side by side, offering an interesting picture of the transition period when Hellenism was on the decline, and the empire of the Romans in the ascendant.

The excavations at Delos have been recently resumed (1902). The Duke de Loubat, one of those patrons of art of whom France may be proud, combining great insight with splendid devotion, has on the advice of Perrot granted 50,000 francs (£2000) yearly for this work. Under the guidance of F. Dürrbach and A. Jardé, and the assistance of Convert, a general clearing of a great part of the field of excavation has taken place. The excavation of the magazines along the harbour has been undertaken, and rubbish has been extensively cleared away. The "House of Kerdon," the workshop of a sculptor, has offered interesting material. We may expect almost with certainty that the gap left after the earlier fifteen years' work will now be creditably filled.

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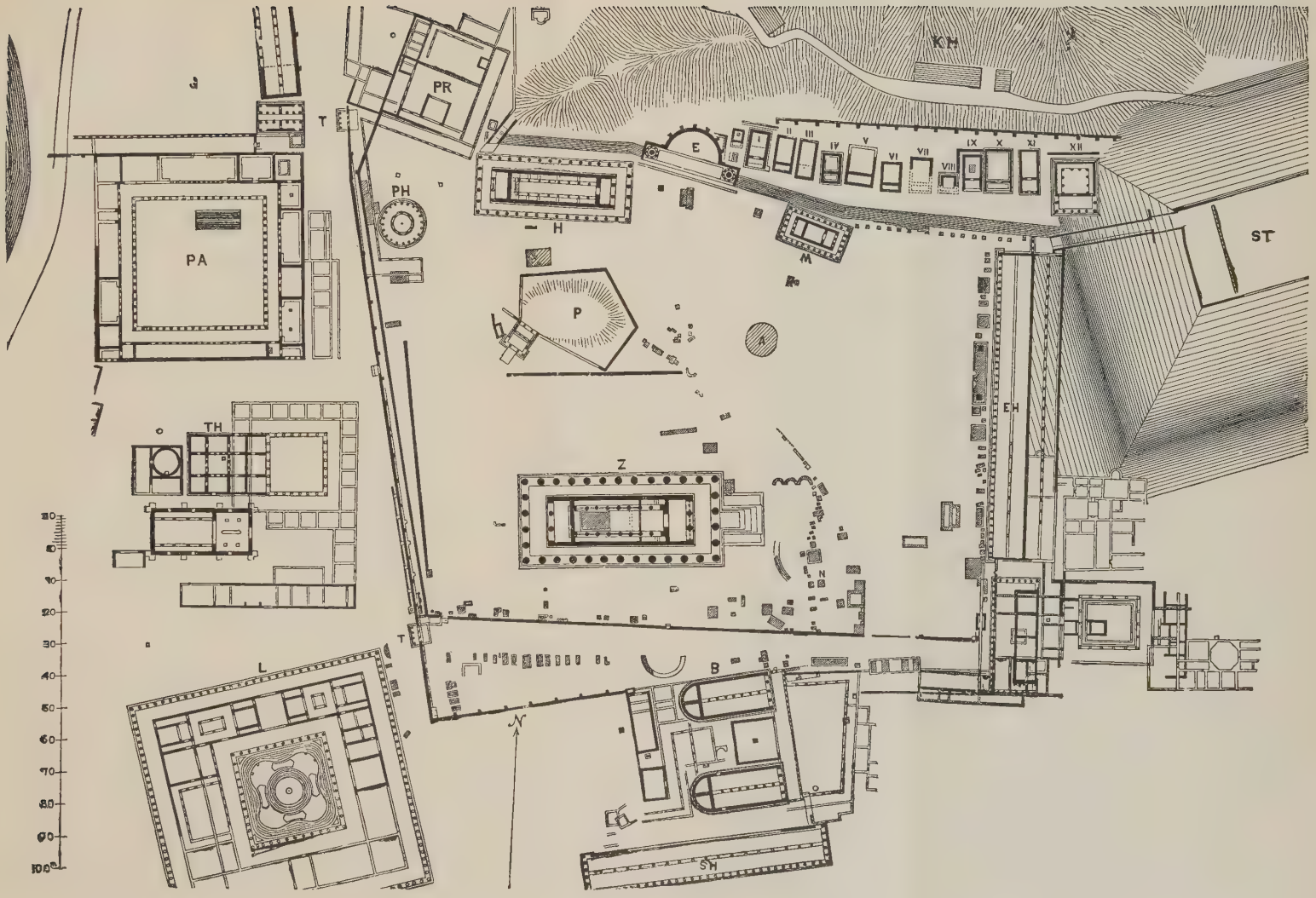
Before the excavations at Delos had been commenced the newly created German Empire began to execute a long-cherished plan on the Greek mainland—to clear of rubbish the sacred precinct at Olympia. Winckelmann had already dreamed of this. Blouet's excavations (p. 52) had proved the great value of such an undertaking, and Ernst Curtius in a lecture in Berlin in 1852 had tried to arouse enthusiasm for it. But, when during the following year Ludwig Ross opened a subscription in Germany, the meagre result was only 787 marks (£39 7s.). It was only after the establishment of the German Empire in 1871 that extensive plans, requiring large means, could be carried out. It was again Ernst Curtius, who had in the meantime been called to Berlin and occupied Gerhard's chair, who now turned to Olympia and combined this with other plans. The Archæological Institute had

in 1871 been placed on a firmer basis as a Prussian State institution; now in 1873 it was transformed by the Reichstag into an institution of the German Empire, and at the suggestion of Curtius a branch was established in Athens. The imperial confirmation came the following year, and Curtius was sent at once to Athens to arrange with the Greek Government the conditions on which the German Empire was to acquire the privilege of excavating the Altis, the sacred precinct of Olympia. As the Greek Government prohibits the export of antiques, the German Empire renounced all claims except in case of duplicates being found; thereby giving a magnanimous example of carrying on a costly enterprise under the supervision of a Greek ephor, simply in the interest of science. Narrow-minded critics of this contract were not wanting in Germany, and curiously enough it was fully a year before the representatives of the people in Athens consented to this disinterested agreement.

Its realization began in 1875, but its execution was not entrusted to the recently established Athenian Institute, which would have required assistance, but the supervision remained in Berlin in the hands of Ernst Curtius and the architect Friedrich Adler.

The work occupied six winters, 1875–80. The German Empire spent 600,000 marks (£30,000) upon it, and the Emperor William bore the expenses of the last winter. Gustav Hirschfeld, with the assistance of Adolf Bötticher, began work on the Temple of Zeus in 1875. A late wall was discovered into which many pieces of sculpture had been built, and in consequence received the name "the longer the better." Georg Treu in 1877 succeeded Hirschfeld as director, Karl Purgold undertook the inscriptions, and at times Rudolf Weil and Adolf Furtwängler were actively engaged.

The architectural work was undertaken by Richard Bohn, and later by Wilhelm Dörpfeld, who gained his



PLAN OF OLYMPIA

A Altar of Zeus (?). B Buleuterion. E Exedra of Herodus Atticus. E H Echo hall or portico. G Gymnasium. H Heraion. K H Kronos hill. L Leonidaeon. M Metroon. N Nike of Paionios. P Pelopion. P A Palaestra. P H Philippeion. P R Prytaneion. S H South hall or portico. St Stadion, 630 feet long. T Entrance gates. Th Theokoleon (?) Z Temple of Zeus. I–XII Treasure houses.

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OLYMPIA

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first laurels here. The task contemplated was the complete uncovering of the Altis, and this was systematically carried out. Nothing was superficially worked, but each spot and each building received careful attention. Each detail was carefully noted, and all the finds were systematically arranged, so as to afford a general view for eventual reconstruction; preservation and arrangement involved reconstruction, quite a new and salutary proceeding. In the case of pieces of sculpture which were shattered into countless fragments, the position of each piece and the depth of the debris above it were noted, and in not a few instances the latter gave a decisive indication of the age of an architectural monument.

According to the current chronology the finds dated from the eighth century B.C. to the close of ancient history and beyond; thus extending over a thousand years. Down in the lowest stratification masses of unpretending votive offerings of clay and bronze were found. They cast, however, an entirely new light on the origin of plastic art. Until then, it was generally believed that Greek art had developed with the representation of the gods; now, however, it was proved that the portrayal of the everyday life of men and animals, of the artist's actual environment, based entirely upon observation, stood at the beginning of the development. The need of an embodiment in human form of the gods came only later with a desire for a house of the gods, a temple. The oldest temple at Olympia, the Heraion, was discovered in close proximity to these early votive offerings. This structure proved of the utmost importance for the history of architecture, inasmuch as it illustrated most vividly the relation of the original wooden construction to the later of stone (Chap. XI). The old construction of sun-dried bricks used in connection with wood, elucidated by modern usage, was incorporated in the history of architecture.

Beside the long and low Temple of Hera appeared the vast Temple of Zeus, the age of which has been greatly discussed, but in consequence of certain details must be placed in the post-Persian times of the fifth century. In contrast to its colossal blocks of conglomerate, hard as steel, and its huge drums of columns which earthquakes have scattered upon the ground, the marble Parthenon appears delicate, almost too elegant. The Doric style of architecture was exhibited here in its full vigour, more even than at Pæstum.

The pediment groups caused great surprise, as they were gradually reconstructed from hundreds of smaller or larger fragments. As the chryselephantine statue of Zeus in the temple was known to have been the work of Phidias, it was taken for granted that the other sculptural decorations must be the work of his pupils. Tradition had indicated Alkamenes, the most brilliant pupil of Phidias, as the creator of the West pediment and the same tradition assigned the East pediment to Paionios, so that he also had to be sought in the same school. It was found, however, impossible to assign the metopes—fragments of all twelve had been found—and still less, to assign the pediments to the school of Phidias, as known by the sculptures of the Parthenon. After numerous discussions it became evident that we had to deal here with an entirely different school. And again, a second fact had to be considered. At Christmas, 1875, an original work was found inscribed with the name of Paionios. It was the great Nike, floating through the air, while her feet rested lightly on an eagle; she had stood on a base 7 metres high (23 feet) overlooking the Altis. This bold conception hardly corresponded to the work of a pupil of Phidias, and not by any means to the tranquil character of the East pediment, traditionally ascribed to the same Paionios. Here was a new problem, which Adolf Kirchhoff appears to have solved from the

Photo, British Photo Co.

NIKE OF PAIONIOS, OLYMPIA

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philological side. The inscription on the Nike indicated Paionios as the maker of the *akroteria* on the temple. It was apparently through supposing this to refer to the pediment groups, instead of the figures of Nike on the summits of the gables, that tradition came to represent Paionios as the creator of the East pediment group. Why the West pediment should have been attributed to Alkamenes has never been explained ; some have thought of an older Alkamenes of pre-Periclean times (Chap. XI), to whom then probably both pediments would have to be assigned. But this theory also presents great difficulties.

Paionios was a native of the Thracian coast, and the home of the older Alkamenes, according to a doubtful report, was Lemnos. Thus Brunn conceived the idea of seeking a North Greek school of art in the work of the Temple of Zeus. Kekulé advanced the theory of Magna Græcia and Sicily, where the artist Pythagoras created a school. Furtwängler put forward a claim for Paros, and Robert even suggested Kolotes, the Parian companion and assistant of Phidias. Others, knowing the temple to have been built by the Elian, Libon, attributed the sculptures to Elian artists, some of whose names have come down to us. Argos has also been suggested. Only a few, such as Flasch, still held to their Attic origin.

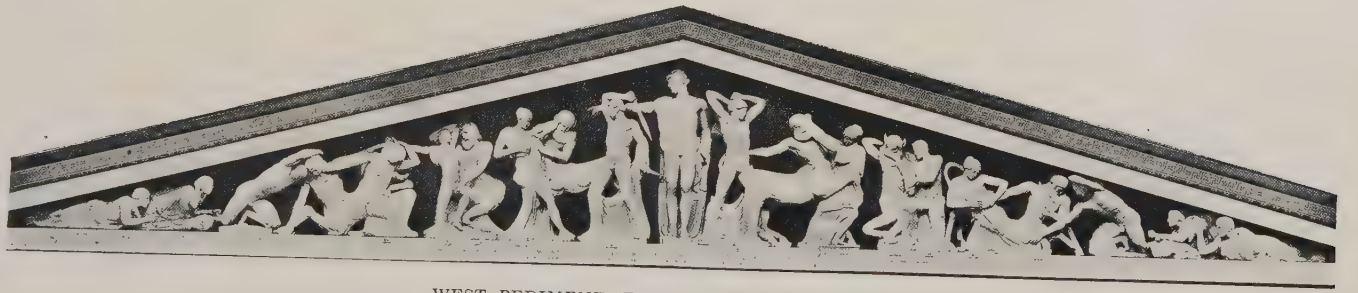
Through the Olympian finds another problem was revived. According to a twofold tradition Phidias either died in prison (438) after the Parthenon had been completed, or migrated to Elis to make the chryselephantine statue for the Temple of Zeus at Olympia. Until recently the latter version was accepted, and the duration of the building of the temple extended. Certain finds, however, indicated definitely that the building must have been finished by the year 456. Thereupon Löschke urged the less-accredited theory : if Phidias died in 438 he could only have worked at Olympia be-

fore the building of the Parthenon, 447–438; his activity there would then naturally follow the completion of the temple and fall in the fifties. This brilliant conjecture was widely accepted, although serious difficulties were raised, partly owing to the dubious source of the tradition, and partly in regard to the legal proceedings. It was maintained that the masterpiece of Phidias was probably made later for the temple, to take the place of a smaller and older statue. One may to-day still say of this question: *grammatici certant et adhuc sub judice lis est*, although the scales are descending more and more to the older and more accredited tradition.

The date of the Nike of Paionios is equally uncertain: does she belong to the middle of the century? or, accepting Pausanias' view, shall we identify the statue with the proud monument erected by the Messenian exiles to commemorate their share in the conquest of the island Sphakteria (425)? A better-preserved copy of the head of this Nike, recognized as such by Amelung, has rather severe features, leading many to adopt the earlier date, which I hardly consider justified.

The authority of Pausanias, the old travellers' guide of the Antonine age, had been rarely called in question until the Olympian excavations, and was indeed brilliantly confirmed thereby as far as the actual facts were concerned, but proved less reliable as regards the information he gathered from literature or from ciceroni. His account of the artists of the temple pediments has already been mentioned; in regard to the Nike of Paionios he relates the twofold tradition. In a unique manner he mentions and describes each figure of the East pediment group representing the preparation for the chariot race of Pelops and Oinomaos. The exact number described by Pausanias has been found, although in one case Pausanias described a kneeling female as a male figure. Considering that, in addition to this, the form of the

EAST PEDIMENT, TEMPLE OF ZEUS, OLYMPIA



WEST PEDIMENT, TEMPLE OF ZEUS, OLYMPIA

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pediment, the size and attitudes of the figures, and finally the unfinished condition of the back of the statues provided most important clues to their position, it might be expected no doubt could exist as to the position of the thirteen statues and eight horses. Indeed, it is quite certain that the five upright figures occupied the centre, the two reclining figures fit into the corners of the pediments, and the two four-horse chariots occupied the intermediate space; therefore only 2×3 statues remain doubtful. And yet more than a dozen different reconstructions of these have been made! Important questions, such as the relative significance of the circumstances of the find, of technical characteristics, and of the symmetry necessary for the pediment, played a part beyond the object itself, and afforded discussions for years, until now Treu's arrangement has received nearly unanimous approval, although certain advantages of other groupings are not to be denied.

This long digression in connection with the Temple of Zeus aims at showing how every new discovery not only extends our knowledge, but frequently creates doubts where we until then imagined ourselves to be tolerably certain; how in consequence new problems arise, which stimulate science and widen the scope of inquiry. A new discovery may at times appear as a step backwards, at least as a loss of certainty, but in every case it brings about a methodical, and later a positive, advance.

The latter is the case with the brilliant discovery at Olympia of the Hermes of Praxiteles, the only original work of art we possess of a Greek artist of the first rank, an artistic revelation in its marvellous technical perfection. When the divine youth—found exactly on the spot described by Pausanias, and on the whole well preserved—had been cleaned of the protecting clay, no one could doubt that the Hermes of Praxiteles had been found. And yet the copies we had known, or thought

we knew, of works of this master were so different that at first the thought arose that we were not dealing with the famous Praxiteles, but with a grandson of the same name.

But this did not last long. The statue at Olympia soon became the chief object in our study of Praxiteles, and shed light in all directions; thus, for example, the "Antinous" of the Belvedere, whose place had till then been sought for in vain, was now brought into relation to it.

The clear and distinct view obtained of the Altis at Olympia in consequence of the excavations carried on there, affords a striking picture of a Greek religious and festal site. While at Delos the sacred precinct is thickly crowded with buildings of all kinds, on the right and left surrounded by the town, and toward the west extending to the harbour, the Altis is situated in the plain, not near any neighbouring settlement. To the north the hill of Kronos towers above it, to the west is the turbulent Kladeos, and the southern boundary is formed by the broad Alpheios. The plain was so spacious as to afford ample room beside the Temple of Zeus for the Heraion, the Pelopion, the Metroon, and for innumerable votive offerings. Many of the bases with inscriptions have been recovered, forming valuable records of the history of artists. The Peloponnesian schools were well represented, above all the family of Polykleitos, for several generations. To the north the area was bounded by a terrace with a series of treasuries, in which the different Greek states stored their treasures and offerings to the Olympic Zeus. The treasury of the Megarians yielded the most ancient attempt at a pediment group in relief. The round structure of the Philippeion to the west had contained the statues of the Macedonian royal family, and showed the intrusion of monarchical influences. Toward the east the "Echo Colonnade" formed the boundary,

one of the oldest examples of a device which came more and more into favour for enclosing a precinct. To the south, Roman structures—among them a Triumphal Arch—have crowded out the more ancient buildings. Numerous buildings extended outside of the walls of the Altis, along the Kladeos, as the Gymnasium, the Palæstra, the great guest-house called the Leonidaion, and many sanctuaries. To the south the Bouleuterion, consisting of three different parts, excited special interest; the Stadion extended toward the east far into the plain, and here lay the Hippodrome now completely washed away by the Alpheios.

The leaders of the excavations have in a most exemplary manner preserved all that was uncovered, a duty frequently neglected. The visitor to-day can gain a clear view of the whole, so long as there are no inundations of the river and rampant vegetation does not destroy and re-cover the scene. Only recently the generosity of a Bremen art-lover, Karl Schütte, has permitted two columns of the Heraion to be carefully reconstructed under the supervision of Georg Kawerau, thus helping us to form a clearer picture of this very ancient temple. A small museum designed by Adler, and established by M. Syngros, contains all the sculpture, bronzes, terra-cottas, and architectural fragments; rooms are also provided for students. All would be well if only the Hermes were not here. To the Museum at Olympia rightly belongs all the sculpture which had its origin at Olympia, as the Nike of Paionios and the pediment groups of the Temple of Zeus. The Hermes was certainly not made in Olympia by Praxiteles, and owes its place there to an accident unknown to us. It is a work of such exceptional merit that only Athens, probably its place of origin and its spiritual home, is the right and worthy place for it. A cast would suffice for Olympia. May it be possible to set aside all petty considerations which

prevent the transfer of the Hermes to Athens. Preliminary reports on the excavations were published from the beginning of the work, and after its completion a great authoritative publication appeared, in which, besides Curtius and Adler, participated the architects Dörpfeld, Borrman, Gräber, Gräf, and the archæologists Treu and Furtwängler.

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It was only natural that the Greeks should wish to take an active part in these investigations relating to their own antiquity. Their first undertaking at Dodona had been rather strange. The situation of the oracle near Dramesso, south of Yanina, had been recognized as far back as 1830 by T. L. Donaldson. Leake, however, expressed doubts as to this view, and when in 1858 Gaultier de Claubry, a pupil of the French School, recognized Donaldson's discovery, it remained unknown. A Polish engineer, Sigismund Mineyko, commissioned by the province of Yanina, began in 1875 excavations near Dramesso, and definitely established the site of the famous oracle by inscriptions and other finds. The excavations were continued until February, 1876, yielding rich art treasures. A banker of Epirus (Ambrakia), Constantinos Karapanos, living in Constantinople, secured a firman which annulled the permission granted by the province ; but he had a representative, Lekatzas, digging for five months, without meeting with any success. Thereupon he bought at Yanina antiques from various sources, part of the objects found by Mineyko and his companions, although by no means the most important ones. In consequence of these purchases, and while disguising the true circumstances, Karapanos represented himself in a publication as the discoverer of Dodona. The theatre and temple mentioned by Donaldson were, of course, ignored. But the votive offerings of bronze

appear all the more important. Some of these correspond so exactly with others found at Olympia and Delphi that one cannot fail to recognize that these offerings must have been made in certain establishments for distribution to the different cult centres. Part of the collection retained by Mineyko has recently been acquired for the Berlin Museum, thus supplementing the valuable antiquities of Dodona.

Of great significance about this time was the work of the Greek Archæological Society (p. 53). Until now the Society had only modestly undertaken minor tasks. Now, however, in 1876, it began to uncover on the south slope of the Acropolis the sanctuary of Asklepios, which, as we have since learnt, was established in 420 as a branch to the cult of Asklepios at Epidauros.

A considerable number of votive reliefs with characteristic sculptures of the fifth and fourth centuries were found, representing the healing divinity, at first as a physician standing holding a rod, and in the later reliefs as an enthroned god with serpent and sceptre, surrounded by his votaries. However, for want of a competent architect, the general survey of the older and later temples, the altar, the colonnade, and the spring remained obscure, and only years later received careful elucidation at the hands of Dörpfeld.

Dörpfeld, who had been the soul of the new methods of preservation at the excavations at Olympia, settled, after the completion of this great work in 1882, in Athens. He was connected with the German Archæological Institute, and soon became one of its permanent secretaries. His great proficiency, his experience, his generosity in placing his vast learning at the disposal of others, made him soon the favourite adviser of the Archæological Society, whose technical surveys he usually executed. This proved of the utmost advantage to Basileios Leonardos when he began to excavate the

Amphiaraion for the society in 1884–7. Opposite to Eubœa, in the district of the ancient Oropos, lay the site where, according to the legend, the seer Amphiaraos, on the return of the "Seven against Thebes," was swallowed by the earth and rescued from his pursuers. An oracle had been established there and early finds had indicated the spot. Leonardos began work here and found the sanctuary. Before this small temple, beyond the river-bank, stood an altar dedicated to five divinities, a palpable example of an altar belonging to several deities so common in antiquity. Structures were found specially designed for festivals, and of interest was a theatre, which, though not a large one, was remarkable as being found in so isolated a place. It may have served not only for scenic performances, but as a general gathering place for other occasions. In any case, certain well-preserved peculiarities of the stage, recorded in inscriptions, became of importance in view of the inquiries soon to be made regarding the Greek stage and its uses.

The means of the Archæological Society had now considerably increased; it also possessed an able and energetic leader in Panagiótes Evstratiádes, so that it was no longer satisfied with small undertakings, but took in hand two very important excavations: Eleusis and Epidauros.

The sanctuary of the Eleusinian Mysteries was no longer virgin soil. Gell and his companions (p. 32) had sketched the general outlines of the sacred precinct. Charles Lenormant had in the year 1859 made some excavations during the journey which ended his life in Athens. His son François later published these results. These were, however, quite overshadowed by the discovery in the same year of the great relief during the building of a school near the former small Temple of Triptolemos. This soon gained a famous place in early

ELEUSINIAN RELIEF, ATHENS

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Attic art as the Eleusinian Relief. Its subject is the "sending forth" of Triptolemos by the two great goddesses Demeter and Persephone with the seed-corn, the blessing of the husbandmen. Under the guidance of Demetrios Philios, and with the constant advice of Dörpfeld, thorough excavations were begun here in 1882, and continued until 1890. Behind the sacred precinct rises the low but steep castle-hill, and before it is the expanse of the beautiful bay, along the shore of which came the torchlit processions of the *mystæ* to the sanctuary of Eleusis. Within the walled precinct the chief building was the Telesterion or Temple of the Mysteries, differing from ordinary temples in its square form. Excavations revealed within rows of steps on all four sides; while in the middle columns were disposed in rows to support an upper storey. Careful examination of the pillars, their size and material and their disposition, revealed different stages of construction. For the mysteries of the Peisistratan period a very much smaller building had sufficed. The Periclean structure designed by Iktinos, the architect of the Parthenon, was thrice the size of the earlier one. Ascending to the upper part of the structure was a broad flight of stairs on either side, opening into a wide passage hewn out of the rock. It has been ascertained that for the front, if not for all three sides, a colonnade had been planned, but only executed much later, about 300—the only decoration on the exterior of this enclosed building. If not all the secrets of the hall have been revealed to us, our knowledge of it has been greatly extended.

Well-preserved walls of sun-dried bricks take us back to very ancient times; in consequence of their having been early covered with debris and earth, they escaped the damp, and were thus protected, affording an example of that rarely seen method of building (p. 127). F. Noack discovered this ancient construction at Eleusis

(1905-6) and continued the investigation. Among the earliest remains may be mentioned the Pluto grotto, a small sanctuary cut into the rock; within it a well-preserved and extraordinarily handsome youth's head was found, with an abundance of hair, related in style to the so-called Vergil bust. Benndorf and Furtwängler recognized therein with great probability the Eleusinian chthonic god Eubouleus, whose image is ascribed by an inscription found about the same time to no less an artist than Praxiteles. A second masterpiece of the great artist to be placed beside the Hermes! To many this seemed too great a piece of good fortune, and they preferred to see Triptolemos in the newly discovered head.

The two entrance gates to the sacred precinct showed curious combinations of different periods of art. The outer gate, probably of the late Attic period, simply copied the central part of the Athenian Propylæa, an instance among many of the poverty in architectural invention of the times. The inner gate, a foundation of Appius Claudius Pulcher, of the time of Cicero, is more characteristic, and combines features of the Hellenistic period in its Corinthian capitals with ornate garlands and corner figures representing griffins.

On the whole, Eleusis offered a perfect picture of a cult-site arranged only for the mysteries, not as uniform in style as Samothrace, but of importance inasmuch as it permits us to follow the development for centuries of this most famous sanctuary of the mysteries of the Greek world.

The sanctuary of Asklepios at Epidauros is again quite different. The Archæological Society began excavating there in 1881; the French expedition had in 1829 established the general outlines of the extensive plan. These new excavations were under the supervision of Panagiotes Kavvadias, a pupil of Brunn, and at the time still an ephor of the society. Later, in 1885, Kavvadias

became Director in chief of the Royal Museums and Antiquities and the head of all Greek excavations, but his interest in Epidauros continued, and until recent times these excavations have had his special care. The reward proved great!

The Hieron of Asklepios, one of the most important cult-sites of the healing divinity, is situated about eight miles inland from Epidauros. The elevated level plateau must have been considered most salubrious, as the sanctuary developed into a much-frequented health resort. Numerous inscriptions found there furnish strange evidence of the superstitious trust which the suppliants reposed in the miraculous cures of a priesthood to whom rational medicine was entirely alien. The arrangement of the sanctuary, of course, had to correspond with the requirements of a health resort. The enclosed precinct was here also approached by Propylæa, and contained a temple dating from the beginning of the fourth century. Remains of pediment sculptures have been found, and inscriptions assign these to Timotheos, showing us works of this distinguished artist's youth. The delicate motives of drapery afforded great scope to his genius. Later he worked on the Mausoleum. The innumerable bases of votive offerings, which surrounded the temple and altar, testified to the great veneration the god of Epidauros enjoyed. Long halls, some even of two storeys, served as sleeping-places for those who had come to consult the god, and awaited healing in their sleep. A peculiar building of enigmatical character was the Tholos or Thymele, a round structure with two concentric series of columns. Its subterranean passages were arranged like a labyrinth, and their significance has never been fully explained. It has been suggested that the snake of Asklepios was kept there. The Tholos, which was several decades in construction, remains for us one of the oldest, if not the oldest, round structure of the kind

in Greek architecture. The Corinthian capital found here is one of the earliest examples of what later became its normal development. Although the Tholos is not a large building, it displays in the plastic ornaments of its later portions a technical perfection which surpasses even the Erechtheion at Athens. Tradition mentions Polykleitos as the architect, certainly not the famous sculptor in bronze of the fifth century, but a younger member of that family of artists. But was this Polykleitos, as seems very probable, the first designer of the plan, or was he the later artist who designed the Corinthian columns and the delicate decorations of the interior? Some new discoveries may bring complete certainty.

Adjoining the sacred precinct other extensive buildings (chiefly of Roman times) were added for gymnastic exercises or for the entertainment of guests. There was, for instance, a stadion, but the most remarkable feature of the Hieron was the beautiful theatre, situated in a hollow of the hill a short distance from the temple. The well-preserved tiers of seats of the spacious auditorium had been known since the work of the French expedition, and fully confirmed the fame, which ancient tradition attributes to this second work of Polykleitos as the most beautiful and harmoniously designed theatre in Greece. Kavvadias also excavated the orchestra with its approaches and the remains of the stage ; against all expectation the orchestra proved circular, whereas those previously known were semicircular or in the shape of a horseshoe. Enough remained of the stage to permit a reconstruction of the side ramps leading to the upper part of the *proskenion*. The theatre at Epidauros became the starting-point for Dörpfeld's investigations of the Greek theatre, which have held the attention of scholars for the last twenty years. It may be taken for granted that originally, during the classic times of the Attic drama, both chorus and actors used the orchestra

THEATRE AT EPIDAUROS

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for acting, and that the background was formed by a small players' booth with low roof, not a raised stage. Discussions still continue unabated, whether the stone *proskenion* in the existing theatres—none of which date back to the times of Sophocles or Euripides—belonged to such players' booth, or, after the chorus disappeared, may rather have been a raised stage. The question, in any case, became of such importance as to cause a thorough examination of the ruins of theatres. While twenty years ago few theatres but those of the Roman type were known to us, to-day we know more than a dozen genuine Greek theatres. Archæologists of all nationalities have taken part in these investigations. Only the following theatres need be mentioned: Megalopolis, Mantineia, and Sikyon in the Peloponnese; at Athens; at Eretria in Eubœa; at Priene, Magnesia, and Pergamon in Asia Minor. Again a systematically worked find has suggested great problems, and their study has resulted in numerous discoveries.

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But a word must be added here on the hardly less famous sanctuary on the island of Kos, the home of Hippokrates. Excavations were carried on during 1902–4 by Rudolf Herzog and the architects Gustav Hecht and Ernst Wagner, with means provided by the German Empire, the Government of Würtemberg, the German Archæological Institute, and some private patrons as the manufacturer Ernst Sieglin of Stuttgart. The sanctuary was situated not far from the city of Kos, on a mountainous height, on the site earlier recognized by the epigraphist R. Paton. The original sanctuary consisted of a stately altar, an ancient temple, a spring, and some cypresses. Finally during the third century a Hellenistic design with three terraces was carried out. Below was an extensive "sacred market-place" sur-

rounded by colonnades; above it is the old cult-site, but enlarged and with many additions, as a new Ionic temple. A broad and high staircase led from here to the new marble Doric temple above, which seemed to dominate its entire surroundings; the remains of the sacred cypress grove perhaps forming the background. On either side of the temple and behind it were buildings with colonnades containing probably rooms for the accommodation of the invalids. The whole gives an excellent idea of a model structure in the Hellenistic style, for here, not as at Samothrace, nearly all traces of earlier foundations had been obliterated.

By the side of the Asklepios sanctuary at Kos may be placed the very ancient sanctuary of Poseidon on the island of Tenos; excavated by the Belgians, Hubert Demoulin, 1902–3, continued by Paul Graindor in 1905. The temple, with architectural accessories, some works of art, and numerous inscriptions, testifies to the popularity of the cult of Poseidon and Amphitrite, and this has its modern counterpart in the Evangelistria, whither for the past eighty years pilgrimages have been constant.

The American School founded in Athens in 1882 now contemplated another task. The ancients looked upon the Heraion at Argos as one of the oldest Doric temples in Greece. It was situated about four miles from Mycenæ, on the eastern border of the plain of Argos. This very ancient temple was consumed by fire in 423; a new temple was immediately erected, for which Polykleitos, the most famous artist of Argos, made a chryselephantine statue of Hera to rival the Olympian masterpiece of Phidias. The site of the sanctuary had long been established; some trial excavations made in 1854 by Alexandros Rhizu Rangabé at the request of Ludwig Ross for the "787 Olympian marks" (p. 125), and directed by K. Bursian had only insignificant results. In 1892 the American School, under the direction of Charles

Waldstein, began work there. Unfortunately the remains of the older temple, on the upper terrace, were so fragmentary as to make it impossible to ascertain with certainty its ground-plan; it would appear, however, as if this temple (though it is a fantastic assumption to date it far back in the second millennium) had preserved more faithfully than other temples in the East the form of the Homeric house (Chap. VIII). More extensive were the remains of the Later Temple; however, not a great deal of it was discovered, most blocks having probably disappeared as building material in the neighbouring villages of the plain. The remains of sculptural decorations of the temple are the most valuable; they are undoubtedly of the school of Polykleitos, as those of the Parthenon are of the school of Phidias. They teach us how great, even then, was the influence of Attic art upon that of the Peloponnese.

The results achieved by the excavations carried on in 1902 by Furtwängler, Thiersch, and the architect E. Fiechter on the island of Ægina were great and unexpected. In 1811, when the pediment groups were discovered, excavations of the entire temple were not carried out, and with the exception of some minor work of Staïs in 1894, none had since been undertaken. The new Bavarian excavations supported by the Prince Regent Luitpold aimed first at completing the statues found years ago; then extended beyond this, greatly adding to our knowledge of the entire sanctuary.

With exemplary thoroughness its history has now been traced through three consecutive stages of development. A new name for the temple was also recovered. The temple had at first been looked upon as of Zeus Panhellenios, the most famous sanctuary on the island, a forged inscription intended merely as a joke being taken so seriously that Cockerell, one of the discoverers, in 1860 still maintained it. As early as 1837 Ludwig Ross

had shown this inscription to be a forgery, and tried to prove by another inscription that the temple was Athena's, a view Stackelberg had expressed in 1826, and Mustoxydès in 1831. Furtwängler recently proved that this also is untenable. As the name of the Cretan and Æginetan goddess Aphaia has appeared on numerous inscriptions the temple is now claimed for that divinity. It has been found on an archaic building block where an incised inscription records the building of a house (οἶκος) and an altar to the goddess. This new name has gained universal approbation. If I still entertain doubts as to its correctness, my justification rests on a reliable and, as I believe, faultless record which states that the cult of Aphaia at Ægina was founded in a sanctuary of Artemis, which would not, by any means, exclude Aphaia from enjoying even greater popularity than the chief goddess, and that she possessed, besides an altar, a special house (which, according to ancient usage, means a house to contain the numerous votive offerings dedicated to her). However this may be, the pediment groups refer neither to Aphaia nor to Artemis, but celebrate the victory of Salamis, and the name of the temple is fortunately not of importance in their interpretation.

The excavations yielded a number of fragments for the Munich pediment groups. Not only these additions, but an accurate examination of those already in Munich and of Thorvaldsen's restoration led Furtwängler to an entirely new arrangement of the pediment groups. Thorvaldsen's and Martin Wagner's old restoration had long been known to be incorrect. A series of examinations, in which Karl Friedrichs, Heinrich Brunn, Adrian Prachow, Konrad Lange, Leopold Julius, and Bruno Sauer had taken part, seemed to give as a final result a strictly symmetrical composition, a battle scene, for the West pediment. The action here centred in a fallen

TEMPLE OF APHAIA, ÆGINA

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WEST PEDIMENT, TEMPLE, ÆGINA

From a lithograph by Bruckmann

EAST PEDIMENT, TEMPLE, ÆGINA (FURTWÄNGLER'S RESTORATION), MUNICH

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warrior in the middle, lying at the feet of Athene. The group, composed of twelve figures, formed a complete whole, and it was this which pre-eminently seemed to distinguish the composition from earlier ones. Only five figures of the East pediment were found, and it was assumed that it contained a similar composition with slight diversities. Brunn proved as early as 1867 that the latter showed a higher form of art than the West pediment (Chap. XI). Furtwängler's critical studies, however, had quite different results. According to these the West pediment falls into four distinct groups: on either side of the goddess are two warriors fighting over a fallen warrior, and beyond these an archer and a man with a lance appear to be overthrowing a man in each corner; thus the movement tends from the centre to the corners. Instead of one harmonious whole we have a battle scene in four distinct groups, which are parting asunder as if intended to counteract the idea of a co-ordinated whole. The more advanced artist of the East pediment realizes this fault. Although his composition, limited to eleven figures, is divided into two distinct battle scenes, yet the two halves are directed towards the middle where the goddess forms the point of union for the composition. If Furtwängler's new reconstruction is correct (without a re-examination of the originals it cannot be definitely stated, but according to Furtwängler's account it appears very probable) the two groups show an interesting intermediate period of art in the development of pediment groups, falling midway between the single and detached scenes of the pediment of the Treasury of the Megarians at Olympia and the complete groups of the East pediment of the Temple of Zeus at Olympia and the pediments of the Parthenon.

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It now remains only to mention two excavations of the French School; one formed the brilliant close of all the enterprises directed towards the recovery of Greek cult sites during the last century. Both sites were, like Delos, dedicated to Apollo.

Mt. Ptoïon rises with many peaks in Bœotia, south-east of Lake Kopaïs, and upon its summit Apollo possessed in ancient times a popular cult site, which after the Persian War was far less frequented. The site, therefore, appeared most alluring, for one might fairly expect to find very early remains. Maurice Holleaux (1885–6) was fortunate in finding an old grotto of Apollo recalling Delos, and an old altar. These had later been replaced by a temple. Numerous other structures were found, great ancient cisterns, such as were necessary on these heights, and minor buildings such as belong to all sanctuaries. A number of archaic statues were discovered. Although those primitive attempts to represent the form of a nude youth, the so-called statues of Apollo, had for a century come to light everywhere, even to satiety, yet the " Ptoïon Apollo " presented such striking features as to secure him a prominent place in the long line of youths advancing with the left foot. Products of the handicrafts, dating from the eighth to the sixth century, were found in great numbers at Ptoïon : clay pots and figurines, bronze figures and implements, among them archaic tripods such as had been found at Olympia, and such as we recall from Homer. In contemplating these objects one perceives how general was the veneration of the Ptoïon god, and how these offerings were produced in localities both near and far ; some are native, some Ionian, some come from the Peloponnese. If a complete publication had been issued, it would be possible to form a better judgment of the whole. Near Elateia, in Phocis, the sanctuary of Athene Kranaia had been successfully investigated by Pierre Paris in 1884.

The chief work of the French School, comparable to that of Olympia, was at Delphi, the great festal centre in Northern Greece. Nature formed in "rocky Pytho" the greatest contrast to the level plain of the Alpheios. Delphi can only be approached on two sides by mountain paths. To the north the Phædriades rise precipitously, steep cliffs of Parnassus. The rocky soil descends abruptly, with hardly any terraces, southward to the Pleistos; beyond it bare Kirphis obstructs the view to the Bay of Corinth. It is a most magnificent solitude, only perhaps surpassed in Greece by the neighbourhood of the Styx. The precinct of the oracle was situated on high under the shadow of the Phædriades rising abruptly from south to north. Two transverse walls were visible here, the supporting walls of artificial terraces. Below was the "Hellenikó," a freestone wall; above the "Pelasgikó," a polygonal wall, above which the south steps of the temple appeared. The rest was completely hidden and covered by the huts of the wretched little village of Kastri. In 1840 Karl Otfried Müller was struck and killed by the rays of the Delphic god, while helping to decipher the numerous records found in the Pelasgikó. In a modest way Conze and Michaelis helped in this task in 1860; the following year the Pelasgikó was successfully cleared by Paul Foucart and Karl Wescher. In 1862 Wescher proved that this wall, the terrace wall of the temple, turns abruptly north at its east end. This indicated the extent of the temple precinct on this side, and the direction of the approach to the temple. The main features of the topography of Delphi had been established in 1838 by Heinrich Nikolaus Ulrichs, as far as was possible without excavations. Among the few pieces of sculpture found was a slab with a relief of a four-horse chariot, which was later joined by its fellows. Years of inactivity followed. Only after the Archæological Society in Athens had, in 1880,

bought the land and placed it at the disposal of the French School was work again resumed. Foucart, the director of the school, sent Bernard Haussoullier there; he excavated at the corner of the Pelasgikó discovered by Wescher part of the Sacred Way and an Ionic Hall which inscriptions proved to be the Stoa of the Athenians, destined for trophies of victories. Its date was not quite clear, but it may be a monument of the battle of Marathon. Haussoullier's great success led the French School to contemplate the excavation of the entire sanctuary of Delphi. But a long time intervened before work was actually begun. Foucart succeeded as early as 1882 in concluding an agreement with the Greek Government, establishing the same conditions at Delphi as had been observed at Olympia. The next change of ministers, however, annulled the contract, and a long period of uncertainty ensued. Political considerations also interfered; and it was believed that the methods of the excavators at Delphi contrasted unfavourably with those at Olympia, so that the scruples of the Greek Government were aroused, Germany was offered the site, but declined out of consideration for France. A second agreement was formed in 1887 between Greece and France, but again it was not confirmed. In 1889 America applied for permission, but without success. Finally, in 1891, after Théophile Homolle had taken Foucart's place, a definite contract was made, transferring all rights of excavation for ten years to France; the French Government granted 500,000 francs (£20,000). A preliminary condition was the complete expropriation of the villagers of Kastri, to which the Greek Government contributed 60,000 drachmas. In the meantime H. Pomtow had carried on some work at Delphi in 1887; its chief result had been the discovery of the main entrance of the precinct in the south-east corner.

Homolle assumed the personal direction of this great

task. He had the assistance of Henri Convert, an engineer, and Albert Tournaire, an architect. The members of the school who assisted were Louis Couve, Paul Perdrizet, and others. This task not only involved great expenditure of time and money, but when the expropriation of the village of Kastri began the inhabitants began rioting and seized the tools of the strangers. Finally, in April, 1893, all preparations were completed, so that the work could begin. It was evident that it was a question of three storeys, as it were, the terrace of the temple forming the middle one. The Pelasgikó separated the two lower ones, and the Hellenikó formed the southern and lowest boundary of the precinct. Homolle began near the latter, and fortune smiled upon him. He at once struck a building, which, according to his ground-plan, appeared to be one of the treasuries, and, according to Pausanias' description, the Treasury of the Athenians. Let us listen to his words :

" After deliberating for twenty-four hours, I believed myself justified in telegraphing to Paris that we had found '*le trésor des Athéniens*.' Our joy was shared in Paris and, for quite a different reason, by the Greek authorities in Amphissa, the capital of the district. The following day I received a telegram from the sub-prefect of that place, who announced the arrival of his revenue official to receive our 'treasure.' The Greek Government was at that time not in a brilliant financial position ; a slight misunderstanding arose, and in their artless way they hoped that ready money had been found in the ground, at an opportune moment, to pay off their interest due."

In the lower third of the sacred precinct the Sacred Way ascends with sharp turns ; on either side of it are the treasuries of the Greek states, and near the entrance gate are some important votive offerings. Only the bases or indications of their position remain as in the case of the

great memorial groups of Marathon and Aigospotamoi—the glory of Athens and her fall. We have again to appeal to Pausanias for the names of the treasuries, many of which are far richer than those at Olympia. For example, the Treasury of the Athenians is a Doric structure with thirty metopes with archaic reliefs. Its walls were inscribed with the Hymn to Apollo, the musical notation of which created such great interest, and gave us the first definite conception of Greek music; besides this records were found on the walls of the official Athenian processions to Delphi. Five oblong metopes were found of the Treasury of the Sikyonians, giving proof how naive had been the early plastic art of that city. The treasury attributed at first to the inhabitants of the island of Siphnos, and later to the inhabitants of Cnidos, is profusely decorated; if, however, we follow Pausanias, we shall have to attribute this treasury to the Siphnians, and seek the Treasury of the Cnidians rather higher. It was a graceful Ionic building, its portico supported by female figures in the place of columns. While we meet here the first indication of what later is carried to great perfection in the Caryatids of the Erechtheion in Athens, the frieze surrounding the building on four sides (the relief of the four-horse chariot mentioned on p. 147 belonged to it) vividly recalls Ionic prototypes of the Parthenon frieze. All is more animated, more naive, than in the more sober art of Periclean Athens, but the pediment groups are still clumsy and heavy. An important addition to the Ionic art of the treasuries was the Column of the Naxians, crowned with an archaic sphinx; it stood near the terrace wall of the temple, the so-called Pelasgikó. As our knowledge of the earlier period of Ionic art is very limited, such an example as the huge but simple capital of this column becomes very important. But that information in regard to Ionic art should come to us from Delphi was entirely unexpected.

PLAN OF DELPHI

1. Main entrance. 2. Side entrances. 3. Bronze bull. 5. Great monument erected by Peloponnessians after battle of Aegospotamoi, 405. 6. Heroes of Argos on the foundation of Messene, 369. 7. Bronze copy of the "wooden horse," 414. 8. Greek monument of Phidias given by the Athenians after the battle of Marathon, 490. 9. The Seven against Thebes (456 dedicated). 12. Treasury of the Sikyonians. 13. Treasury of the Siphnians. 15. Treasury of the Thebans. 18. Treasury of the Cnidians. 19. Treasury of the Corinthians. 23. Treasury of Clazomenae. 28. Treasury of the Athenians. 29. Buleuterion. 32. Hall of the Athenians. 33. Copy of the Nike of Paionios. 34. Treasury of the Corinthians. 36. Tripod votive offering of the Hellenes after the victory of Plataea, 479. 38. Nike and tripod. To the west the column with the acanthus. 41. Temple of Apollo. Behind the cella tripod of the oracle. 46. The lion hunt of Alexander, of Lysippos and Leochares, dedicated by Krateros. Near it the quadriga of Polyzelos (Gelon?). 47. The theatre. 48. Poseidonion. 52. Exedra. 53. Group of Pharsalian princes; Agias of Lysippos. 55. Lesche of the Cnidians.

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Delphi above all other places was common to all the Greeks, far more so than Olympia, which never lost its predominantly Dorian character. Another column found at Delphi shows a particularly rich development of the Corinthian acanthus motive, enhanced by three highly elegant dancing figures which execute their graceful movements aloft. A tripod may have crowned the whole.

Let us ascend the Sacred Way, passing the base of the Serpent column of Platæa and the foundation of the monument of Æmilius Paullus, the victor of Pydna; some fragments of this frieze had become known as early as 1840. According to Pausanias we might have expected to find the Older Temple built in the sixth century, which had received a marble façade from the family of the Alkmaionids, exiled from Athens. Its pediments were executed in the fifth century by pupils of Kalamis, and Euripides has described the decorated metopes. If this temple had been found in the same state of preservation as the Temple of Zeus at Olympia, what problems would have been solved! Nothing remained but some fragments of sculpture of the temple of the Alkmaionids.

The ancient temple was destroyed by an earthquake in 373—as we have learnt from inscriptions—and the later temple, of which some remains have been discovered, dates from the fourth century.

As recorded by inscriptions, the temple was destroyed by fire in 83 B.C., and after that again slowly rebuilt. Did Pausanias quote an obsolete source, dating from before the earthquake in 373? It almost seemed so—and a new opening was given to the moderns who complain of Pausanias' untrustworthiness, when recently Emil Reisch discovered the solution and proved that the Kalamis referred to by the writer was not of the time of Kimon, but was a noted artist of the fourth century. His pupils Praxias and Androsthenes would thus belong

exactly to the time when the temple at Delphi was being built. The investigations at the temple solved new problems in the history of art, although not in regard to the Temple of the Alkmaionids, nor in regard to the pediment groups of the pupils of Kalamis ; these are lost without a trace. The interior of the temple proved disappointing ; not a trace was found of the chasm in the earth where the dragon Python had been slain by Apollo, and over which the priestess sat on a tripod while she uttered the oracles. If the remains of the temple were somewhat disappointing, the uppermost part of the sacred precinct proved all the richer in discoveries. Toward the north-west the theatre was discovered, and near it the fine stadion ; below the theatre traces were found of a group by Lysippos—Krateros saving the life of Alexander the Great at a lion hunt. The discovery of the Lesche of the Cnidians was of supreme importance. This hall, situated towards the north-east, served as a meeting-place ; its walls had been embellished with the two famous paintings by Polygnotos : the Taking of Troy and the Descent of Odysseus into Hades. As Pausanias has described each figure of the paintings, they are for us the most important work of the great Thasian master of wall painting. Numerous attempts at their reconstruction have been made. But all these lacked the foundation which only could be gained by the knowledge of the building and its wall space. This foundation was now acquired. The Lesche proved to be an oblong building open in the centre and receiving light thence, while eight columns supported the roof. The building may be compared with the original form of the Palæstra at Pompeii. As the door was in the middle of the long south wall, it is probable that the two paintings with their numerous figures were so distributed between the eastern and western halves of the hall that each extended over portions of three walls, the central groups being

painted on the narrow east and west walls. This, of course, could not have been foreseen.

Below the Lesche of the Cnidians, not far from the temple, there appeared a great group of marble statues in various styles, representing the family of a Thessalian prince and his connections. The influence of the art of Scopas, of Praxiteles, and of Lysippos is perceptible. Interest in this group has been greatly increased since Erich Preuner proved one of the statues, the Agias, to be the work of the young Lysippos (Chap. XI). But the finest and most famous work the Delphic excavation yielded is the superb bronze statue of a Charioteer from a four-horse chariot. This may have been erected by the Syracusan Prince Polyzalos after 480 to his father Gelon. But this is still uncertain. It is the only remaining example of the innumerable bronze statues which once adorned Delphi, and is hence of the greatest value.

Besides these great architectural and sculptural treasures about 3000 inscriptions were recovered during the eight years' excavation, for the most part of great linguistic or historical interest. As at Olympia, Syngros, and after his death his widow, furnished the means for the erection of a museum. Some of the treasuries, as those of the Athenians and Cnidians, were recovered so completely as to make a restoration possible; like that of the Temple of Athene Nike at Athens (p. 53). The example set at Olympia might have been followed with advantage here. The many fragments and inscriptions scattered over the extensive site might have been brought together and properly arranged; it has already become difficult to find certain fragments and to compare them with others to which they belong.

As the results of the excavation a great publication is being issued to place before the scientific public. It is to be regretted (I am not expressing my own views only)

that the publication begins with the restorations of Tournaire, for no matter how elaborate the drawings are, they contain a great deal that is arbitrary and false, and are calculated more to attract the general public than to satisfy scientific requirements. Other numbers offer excellent plates of the large number of bronzes and of marbles found.

But undoubtedly as the work continues, under Homolle's able guidance, those details will be given, without which it is difficult to judge the architectural reconstructions (p. 120). The buildings form, as it were, the skeleton. Without this solid framework all other works of art lose their bearings.

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During thirty years, while all nations lent a helping hand and shared in the labour, a number of sanctuaries were uncovered, beginning with Samothrace and ending with Delphi and Ægina. All these helped to cast a clear light on a chapter in the history of ritual antiquities till then only known from literature.

Certain fundamental features are common to all these places. The altar is always of foremost importance (in Olympia it has not yet been possible to ascertain its position); small archaic votive offerings are found about it; at times even a cave as at Ptoïon, or an artificial grotto as at Delos. As soon as the divinity assumed the human form the temple appeared as the dwelling of the god's image, and other minor buildings soon became necessary. These conditions prevailed at Ptoïon, somewhat improved at Elateia, and on the whole the same prevail at any number of small or remote cult sites. The noblest type is represented in the Argive Heraion, where the rebuilt temple displayed the full splendour of a perfect art.

The sanctuaries, however, may be distinguished ac

cording to their significance. Where the cult was secret, as the Mysteries at Eleusis or Samothrace, the first essential was the enclosure of the cult buildings as well as the entire precinct. Great gates which could be locked formed the entrance to the precinct, which was either naturally difficult of approach (Samothrace) or secured by a wall (Eleusis). At Eleusis, where certain symbolic spectacles formed the chief part of the ceremonies, they necessitated a large temple of several storeys and surrounded by walls, adjoining which were smaller cult temples. The great Temple was enlarged as the number of the initiated increased. We find at the later sanctuary in Samothrace beside the first temple of the fourth century a more imposing later structure of the age of the early Ptolemies ; both were provided with a sacrificial pit for the special cult of the Kabeiri, and the whole was so extensive that the faithful could all witness the action ; differing, in this respect, from the small Kabeirion in Bœotia, where the sacrificial court was only externally connected with the temple. In Samothrace the round hall of Arsinœ may have been used for other gatherings which demanded an enclosed building. Of the same date probably is the large open hall outside the sacred precinct which sheltered the great number of visitors to the Mysteries, upon this rough and inhospitable island. Far more magnificent were the sanctuaries, which not only served sacrificial purposes, but at the same time were planned with a view to festivals and games. Olympia and Delphi, where the Olympian and Pythian games took place, have yielded extensive information, so that we may hardly hope to learn more from excavations on the Isthmus or at Nemea. Though his temple was rebuilt at different periods, Apollo remained at Delphi the sole divinity (Dionysos only appears beside him and Neoptolemos was buried there), while at Olympia Hera possessed the oldest temple, and near it Pelops had an enclosed

tomb. For a long time Zeus seems to have only received worship at a great altar in the open air ; after the Persian wars, however, there was erected the great Temple, which dominated all its surroundings, and within it was placed the colossal chryselephantine statue by Phidias. The Mother goddess was later admitted as a third divinity. Common to both places, although their situation and their decorations were very different, are the treasuries, in form usually temples in antis. These, from the sixth century on, increased rapidly, to shelter, beside treasures, the small votive offerings of the different states connected with the cult at Delphi or Olympia. Great public votive offerings filled the sacred precinct, and from the sixth century onward also an endless number of statues of victors. The extensive plain of the Altis at Olympia offered ample room, while at Delphi all were crowded along the Sacred Way, or were placed on the narrow spaces afforded on the steep rocky ascent. In both places the entire precinct was enclosed by a wall. At Olympia, toward the east, an extensive Stoa provided a sheltered hall ; while at Delphi the steep cliffs made such an open hall an impossibility. In place thereof the Lesche of the Cnidians appeared on the upper terrace. A peculiarity at Delphi was the theatre within the sacred precinct, which may have been connected with the musical contests at the Pythian festivals. Both at Olympia and at Delphi, the Stadion, the arena for the gymnastic games, was in close connection with the sacred precinct. The racecourse for horses and chariots at Olympia was in the neighbouring plain, but every trace of it has been washed away by the turbulent Alpheios. At Delphi it was necessary to descend to the Krisaian plain below to find sufficient room for the races. The sacred precinct, in both places, was surrounded by numerous other buildings, some only distantly connected

with the sanctuary or the games. This is most clearly evident at Olympia (p. 132).

Although the Amphiaræion possessed a theatre and had games, it is too unimportant, when compared with other national sites, to deserve a lengthy description.

At Delos the cult festival entirely took the place of the games, and the accessible harbour invited Ionians from a great distance. Hence there is neither Stadion nor Hippodrome, but in the one narrow level space the island affords the town with the theatre and palæstra are close to the sanctuary. In consequence all appears very crowded: the temples of Apollo, of his sister and his mother, near the lake, the mythical birth-place of the twins, the treasuries, the halls are all close together, so that the market by the harbour formed the general meeting-place, and the temples of the foreign gods, the Egyptian, the Syrian, and the Kabeiri had to seek a place outside.

The plans of the sanctuary of Asklepios were again quite different, as here considerations of health and cure outweigh those of the cult. The Athenian Asklepieion is so small that it can hardly be considered a health resort; but it lacked neither a spring nor halls. The famous health resorts Epidauros and Kos afforded an open situation and extensive space. Colonnades which served as sleeping-apartments for the many pilgrims formed essential parts of the establishment, and there were besides numerous side buildings. The Hieron at Epidauros had places for gymnastic exercises and a theatre for entertainment, as the Hieron was at a distance from the town, while at Kos the proximity of the city made this superfluous.

These are some of the results we owe to the combined efforts of thirty years' labour. It is, however, quite another matter that the work of these excavations has become the great school for the method and technique of

excavation. Without neglecting single facts or details, excavation aims at creating again a picture of the whole. To ascertain the original form both of the general plan and of its separate parts, to follow the successive alterations that have come in the course of time, to assign to each detail its place in the development, and thus to make the excavation a reconstruction of the lost whole, is the distinguishing mark of the new method.

Samothrace formed the beginning. Olympia stands midway, and the successive excavations of the Greek Archæological Society and the French excavation at Delphi have confirmed the principles gained by experience.

VII

ANCIENT CITIES

THE great endeavour to gain scientific knowledge of ancient sites could not remain content with the exploration of the sanctuaries alone, but aimed at a complete uncovering of certain ancient cities. The two inquiries advanced side by side, indeed in one instance the investigation of cities had taken the lead. It was only natural that this work should be resumed at Pompeii, where it had been begun long before.

In 1860, when the misrule of the Bourbon Government ceased, Pompeii entered upon a new era of research work. The Italian Government justly confided the direction of the excavations to Giuseppe Fiorelli, a thoroughly scientific man, who, during the Bourbon Government, had carried on his Pompeian studies always hampered by petty obstacles. The work was now pursued not only with greater energy, but with better methods. For the most part only single houses had formerly been excavated. It frequently happened that the upper part of the houses fell unavoidably into the more or less narrow trenches, thus making farther examination impossible. In fact, hardly an upper storey was known in Pompeii, although many staircases indicated their former existence. Fiorelli now began to uncover entire blocks of houses (*Insulæ*) simultaneously from the top, stratum by stratum; and where any characteristic part of a building or beam was laid bare, it was carefully preserved,

propped, or replaced by a new beam; thus the excavators worked gradually downwards. It was thus, for instance, that the projecting upper storey was recovered which is so characteristic a feature of the lane to which it has given the name of *vicolo del balcone pensile*. A reconstruction now became possible of Pompeian houses of several storeys and their roofs, thereby extending our knowledge of the Italian construction of dwellings. Fiorelli also deserves the credit of abolishing former difficulties connected with the study of Pompeii, and opening it freely to all. A "Scuola di Pompei" was founded, open to foreigners as well as Italians, and members of the Roman Arcæohlogical Institute gratefully made use of it. Investigations began with those results of the excavations which appeared unique and popular, viz. the wall paintings. Helbig's work in connection with these has been mentioned above (p. 114); he recognized that these paintings essentially preserved the Hellenistic tradition. Otto Donner supplemented this by demonstrating that their much-discussed technique was fresco painting, which deviated somewhat from the modern, but was carried out with great skill in ancient times. With these inquiries the separation of Hellenistic tradition from original Pompeian art became a subject of debate. In 1873, in the year when Helbig's "Investigations" appeared, Fiorelli published the results of many years' study, dealing with the plan of the city and the history of its building. According to Italic usage the area of the city was intersected by rectangular main streets, *cardo* and *decumanus;* we may omit all discussions connected therewith, as we are only concerned with the artistic development. Mention may, however, be made of an Italic city, of about 500 B.C., excavated in 1888–9 by Brizio at Marzabotto, near Bologna, where the systematic plan of laying out streets at right angles is strikingly illustrated.

But more important are Fiorelli's investigations in regard to building materials and the technique of building, and the inferences drawn from them, respecting the history of the building of Pompeii. The fundamental facts were correctly recognized by Fiorelli, and as Richard Schöne and Heinrich Nissen were carrying on studies in the same direction they helped to elucidate many details. The "Pompeianarum Quæstionum Specimen" of Schöne had appeared in 1868, and in 1877 appeared a work containing the studies of both; many supplementary and detailed results were published by August Mau in 1879. The main facts of these investigations may thus be stated:

The most ancient Pompeii is found in the "limestone period," when simple houses were built of the limestone from the neighbouring river Sarno, with the help of clay. These "Atrium" houses were of one storey without columns, and without any painting, thus differing greatly from those of the later Pompeii. The best-preserved example of this original type we have in the *casa del chirurgo*. Then follows the "tufa period" (according to Nissen about 200, but it may be fifty years later), when tufa from Nocera is used with the limestone. Better material made better buildings possible. With the introduction of columns the plan of the old Italic house offered greater variety. To the old traditional type new Greek features were added, rooms of different kinds, the peristyle, and an upper storey. Until then the houses had been closed toward the street, now they were opened with shops. The walls were coloured, although still without paintings. At times the houses attain almost palatial dimensions and elegance, as in the *casa del Fauno*. Imposing public buildings arose on all sides, as the theatres, the baths, and *palæstræ*, the beautiful Basilica, and the Temple of Apollo, with its Hellenistic court surrounded by columns. Everything in this architecturally brilliant period of the Samnite

free city indicated strong influences of Greek art and culture, which apparently were derived from the East, but differ greatly from the architecture of Asia Minor, which had attained in Rome, about the same time, great popularity. All this glory ceased when Pompeii became a Roman colony under Sulla. Burnt bricks now appeared besides tufa and lava, as the popular material in the "brick period." The bricks required plaster, and the walls are no longer simply coloured, but decorated with paintings.

How different is the picture of this gradual development from the former conception of a general brightly coloured "Pompeian style." These details, however, were not of foremost importance, but the fact that here, as elsewhere, the general tendency towards a historic view revealed itself—in other words, towards the recognition of development, that is, of life. Pompeii becomes for us a growing city, in it we see an artistic progress combined with the development of the civic community and with great political events. It was the same ideal (only pursued more energetically and with a clearer knowledge) as that which Ernst Curtius set before himself on Greek soil. His attempts to reconstruct the histories of Pergamon and Ephesos on the strength of topographical knowledge, acquired on his journey in Asia Minor (1871), were unfortunately frustrated through lack of material. He aimed, however, at the same results as Nissen in his "Pompejanische Studien."

August Mau's investigations were parallel with those of Fiorelli, Schöne, and Nissen, and were first published in the "*Giornale degli scavi di Pompei*" in 1873, the same year in which Helbig's researches and Fiorelli's reports appeared. Nine years later Mau offered these to the public in a more complete form. His attention had been attracted to the coloured wall decorations in Pompeii, which, compared with the actual paintings,

had received only scant consideration. Here also the term " Pompeian style " was used, when in reality it was a mixture of heterogeneous types. By introducing the historical method of observation Mau brought system into this chaos.

This, of course, could only be established after the different building periods had been defined. The period of the colourless " limestone " was then excluded; it was only when Hellenistic influence had taken possession of Pompeii that the Greek love of colour appeared. Pompeii's most illustrious age, the " tufa period," contented itself with " incrustation," i.e. covering the walls with an imitation of a variety of coloured marbles made in stucco relief. Pilasters and cornices also in stucco relief interrupted the monotony of the surface. It is a decorative scheme for the exterior, but transferred to the interior, so that purely architectural motives were employed in the rooms. This severe mode of decorating the walls was supplemented by mosaic floors (e.g. The Battle of Alexander, p. 68); Greek works of art, select Greek household furniture completed the picture. This incrustation style gave place to a totally different kind of decoration on the brick walls of Sulla's colony. The rooms, narrowed by their lining of stucco blocks, needed something to give an impression of spaciousness. This effect was aimed at by architectural designs in perspective. The wall remained smooth and the perspective was produced by pictorial means alone. At times the effect was obtained by flower garlands connecting columns, from which the wall appeared to recede; or, again, between dark columns an extensive landscape became visible, sometimes enlivened with figures (p. 70). The house of Livia is one of the best examples uniting both styles. The walls reflected a spirit at once sober and cheerful; to the Roman artist Tadius we apparently owe the introduction of the landscape and figure motives.

Mau established a third style, of Augustan times: it was designated as the ornamental surface style. In it the surface of the wall again assumes its original importance, the perspective vista disappears. All decorations are in the plane of the surface, arranged as borders or carried out in the manner of inlaid work; framed paintings of a severe type take the place of the open-air views. Colours are more restrained, but richer ones are not lacking. The whole decoration, refined and somewhat cold, recalls the courtly poems of Horace; the careful execution corresponds to the distinguished impression of the whole. Finally, the fourth style prevails in the later times of Pompeii, the fantastic architectural style. This is the style we moderns think of when Pompeii is mentioned. It is the consistent development of the second perspective style. The entire wall gradually dissolves into perspectives; architectural figures do not resemble anything real, and the most extravagant fancies are indulged. Colours become more varied, even harsh; the execution becomes coarser, more superficial, and is frequently merely mechanical. Numerous wall paintings repeat the same models, they reflect the world of Hellenistic or Ovidian love poetry, and show a preference for the nude from which the former style quite abstained. This bent was fully exploited in the last years of Pompeii, between the earthquake in 63 and its destruction in 79.

Thus appeared the development of this side of Pompeian art. Mau believes the four periods to have followed each other consecutively. This is certainly true of the two earlier ones; regarding the two latter doubts may be expressed whether they did not exist side by side. The third period may have developed as a conscious reaction against the perspective tendency of the second; elegant, exclusive, and on account of its costliness only used by the wealthy; while the fourth seemed a direct continua-

tion of the second, and its effective representation and superficial workmanship appealed to the demands and means of the general public. This latest style soon supplanted the earlier ones, in accordance with the general tendency of the times of Nero.

Evidently these four styles were not confined to Pompeii, nor did they originate there. Rome offers obvious parallels, particularly to the second and fourth styles; the first has been discovered at Pergamon and at other places, while more recently the second has also been discovered at Pergamon. But the question of the origin of the different kinds of wall decoration and of the factors influencing this development or change remains unsolved, in fact, has hardly been touched upon. Certain facts are, of course, obvious. For example, the incrustation style could only originate in a locality where variegated marble was easily accessible. As regards the third style, a curious product of Augustan times, it is no mere accident that the frequent occurrence of Egyptian ornamentation coincides with the subjugation of Egypt in the year 30. This style has so far not yet been discovered in the capital, and this still awaits an explanation. A notice regarding the Carian painter Apaturios seems to direct us to Asia Minor for the fantastic architectural style of the fourth period, so that we may almost conjecture that the tendency to perspective originated there, in distinction from the earlier Alexandrinizing tendency. But these are all questions in regard to which new discoveries alone can offer solutions; not only must we look to the East, but we may hope to find them in the Greek cities of Southern Italy.

In considering these questions, just as in the case of the technique and the history of the building of Pompeii, we must remember that Pompeii was merely a Samnite country town which under Hellenistic influences developed into a Roman colony of veterans. It is, how-

ever, equally important to assign this picture its place in the more general history of art, which continued to gain its impress from Greece. We must therefore look toward the East to see whether a study of Greek city sites will not extend our vision. Greece proper declined more and more in later times, and cannot be considered so important as Asia Minor, which flourished both in Hellenistic and Roman times. Newton had by his discoveries at Cnidos proved the importance of such work.

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Alexander Conze was again the pioneer in the excavations at Pergamon. Gustav Hirschfeld had suggested them earlier, but it was Conze who started them, and gave them their direction. Texier had given some cursory attention to the capital of the Attalids. Later in 1871 Ernst Curtius and Friedrich Adler had examined the visible ancient remains, and Curtius attempted unsuccessfully to trace the broad outlines of the history of the city of Pergamon. His acquaintance with Karl Humann was a valuable result of this journey. Humann had lived since 1861 in Asia Minor working as an engineer, and since 1869 had been chiefly occupied in Pergamon. This excellent and admirable man had become thoroughly familiar with the language, customs, and surroundings of his new home; beloved by all, he at the same time preserved his German ideals, a practical mind and tenacious energy. Humann seemed to be the man above all others to render valuable services to archæological research. Pergamon proved most stimulating to his great enthusiasm for antiquities. One of the most distinguished reigning families among the successors of Alexander the Great had here taken up its residence, and from here fought and conquered the Galatians, who were devastating the land. The kingdom was enlarged and the capital became a centre of learning

as well as of the arts ; of the latter we still possess brilliant testimonies in the Dying Galatian in the Capitol and in the Ludovisi Group of Galatians in the Museo delle Terme.

It was not surprising that Humann's eager mind conceived the desire to restore some of this former glory by excavation ; for he saw continually how precious remains of antiquity were consigned to the limekiln, a proceeding he soon successfully checked. Although, at first, Hirschfeld's exertions promised success in carrying out this scheme, he received little support in Berlin, where Humann had applied. Humann had sent to the Berlin Museum some fragments from the citadel at Pergamon, consisting of reliefs of more than life size and of extraordinary style, hoping to stimulate its interest, but the management, at the time, was so engrossed in the new cast collection, that it accepted the gift without any thanks or consideration. And yet, shortly before, Brunn had drawn attention to a late record which mentioned the Altar at Pergamon, with its great *Gigantomachia*, as one of the wonders of the world, and archæologists were not lacking who recognized in these fragments remains of this great work. These traces were, however, not immediately pursued.

This only occurred in 1877, after Conze had come from Vienna to Berlin, and had taken charge of the department of sculpture at the Berlin Museum. He seized the first opportunity to place himself in communication with Humann, and consulted him as to the feasibility of excavating for the altar of the giants. At last Humann had found some one to participate in his plans, and he was fired with enthusiasm at the prospect of combined work. The former remains had come from a Byzantine wall, above on the citadel, which now promised further rich spoil. Henceforth the two men worked in the closest friendship, and co-operated with one another in perfect

confidence. The conditions were at the time so peculiar, that the Director-General of the Prussian Museums was not allowed to hear of the plan. Richard Schöne, who later became Director-General, helped the work along, and the Crown Prince gave valuable assistance, so that it was possible to secure a firman in Constantinople, permitting the excavations, before any one heard of it. Prussia was to obtain two-thirds and the Porte one-third of the find. By taking certain precautions it was possible to keep the course of events secret. The eyes of the archæological world were at that moment centred on Olympia, and the general public was so engrossed by Heinrich Schliemann's dazzling discoveries at Troy (Chap. VIII), that Pergamon was thrown in the shade. It actually happened that a cadet, who in the spring of 1879 had helped in the shipment of some of the spoils from Pergamon, wrote home about these, and was reprimanded by his father for incorrectly writing Pergamon and Humann while the name of the place should have been Troy and that of the man Schliemann. The citadel of Pergamon crowns a mountain 1000 feet high, descending by a broad ridge towards the south. On 9 September, 1878, Humann struck his spade into the ground with the following patriotic words, to which, in consideration of his audience he gave an Oriental colouring: "In the name of the Protector of the royal museums, the happiest and the best-beloved man, the warrior who has never been vanquished, the heir of the most illustrious throne in the world, in the name of our Crown Prince may the work prosper and be blessed." "My workmen thought I was uttering a magic charm, and they were not quite wrong." The old Byzantine wall which they proceeded to pull down proved a treasure-house of a remarkable kind, similar to the "longer the better" wall at Olympia. A great part of the magnificent frieze, partly in entire slabs, partly in fragments, was built into the wall with the sculptures

toward the inside. At the very beginning important slabs were found : Helios guiding a chariot and an Apollo. The latter is comparable in beauty to the Apollo of Belvedere. Toward the end of the year thirty-nine slabs had been recovered. Humann rejoiced : " We have discovered an entire epoch in art, we are at work on the most important remaining work of antiquity."

To transport these huge blocks to the harbour of Dikeli, some eighteen miles distant, the high road had to be repaired and a landing-stage built at Dikeli. In the following year, 1879, with the co-operation of Conze, the altar itself was uncovered and a number of slabs were found. The following is taken from Humann's report : " Guests had arrived at Pergamon ; my wife had come from Smyrna and Dr. Boretius of Berlin, while making an Oriental tour, had landed at Smyrna and come over. On 21 July, 1879, I invited my visitors to come to the citadel to see the slabs turned, which stood leaning against the debris, with the sculpture toward the inside. While we ascended seven great eagles encircled the citadel, promising good luck. The first slab was turned. It was a huge giant with serpent-like feet, his muscular back was turned towards us, with the head towards the left, and a lion's skin hung over the left arm. ' Unfortunately it does not fit any known slab,' said I. The second fell, showing a splendid god, the full chest more powerful and yet more beautiful than any. A garment hung from his shoulders, floating about his striding legs. ' Nor could this slab be joined to any known part,' I said. The third slab showed a swooning giant sunk on his knees ; the left hand grasps, as if in pain, the right shoulder, the right arm appears paralysed—before this slab had been quite cleared of soil the fourth one was turned over ; a giant falling backwards on a rock, the upper part of his thigh has been struck by lightning—I feel thy presence, Zeus ! I ran about the four slabs excitedly, and discovered that

the third could be joined to the first; the serpentine legs of the great giant evidently fitted the slab with the giant sunk on his knees. The upper part of the slab is missing where the giant's arm extends, but it is evident he is fighting over the fallen one. Is he fighting the great god? Yes, indeed, the left foot covered with his garment disappears behind the kneeling giant. 'Three can be joined together,' I exclaim, as I contemplate the fourth. It also can be placed. The giant struck by lightning falls away from the god. I am trembling all over. Another piece is uncovered—I scrape off the earth! It is a lion's skin—it is the arm of the huge giant—and opposite is a tangle of scales and serpents—here is the Ægis! It is Zeus! We had discovered a work as great and superb as any in existence, it was the climax of all our labour, a worthy counterpart to the group of Athena. We three happy beings, greatly moved, surrounded the precious find; I then sat upon the Zeus and gave way to tears of joy."

During two years' labour the reliefs of the altar and countless fragments were secured. There remained for Berlin the wearisome and difficult task of fitting them all together, and of discovering the four different sides to which they belonged.

Otto Puchstein deserves the chief credit for this. By methodical research he found indications which justified him in assigning the east side to the great Olympians; the south side to the gods of the day; the north side to the deities of the night, the constellations and infernal powers; while the great staircase occupied the west side. Here was represented the struggle of the earthborn Titans with an Olympus of hitherto unknown variety and extent, exhibiting great diversity of bodily form, an endless surging and rushing. A second smaller frieze, representing the adventures of the Pergamene national hero, Telephos, was arranged and elucidated as far as

Photo, Fitzenthaler

ALTAR FROM PERGAMON

BERLIN MUSEUM

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its fragmentary state permitted by Carl Robert and Hans Schrader; the latter was also engaged on the actual restoration of the altar; while the complete plan of the whole with the colonnade above the Giant Frieze had in the main been already correctly interpreted by Richard Bohn, while he was at Pergamon. The altar was rebuilt in the new Pergamon Museum, and the frieze, with all its details, was placed in a proper light, but those seeing it under a flat glass covering can hardly realize its original position on the lofty heights of Pergamon "where Satan's seat is" (Rev. II. 13).

With the acquisition of the relief altar (Turkey had sold her third) the Berlin Museum attained at one stroke an importance which its former collection of sculpture could not claim. These great powerful reliefs were at first overrated, the impression they created was so novel; by some they were placed above the sculptures of the Parthenon, by others they were regarded as an epitome of Hellenistic sculpture. Both views were exaggerations; the frieze, however, gave an idea of the great capability of Hellenistic art, which had until then been looked upon as impotent and decadent. It became a double acquisition to the history of art, inasmuch as the frieze could with certainty be dated under King Eumenes II about 180. This showy baroque style with its parade of forms and motives, a style until then only known in single fragments, indicates an important tendency in Hellenistic art, and in particular of the Pergamene—at a time when European Greece only produced insignificant after-effects of its classical period. The architectural parts of the altar likewise indicated the aspirations of the age.

This much in regard to the Altar of Pergamon. But it was here as with Saul, who went to seek his father's asses, and found a kingdom. The altar proved only a detail on the Acropolis of Pergamon—should the excavation of the whole be renounced? This decision again

is to the credit of Conze. By urging an extension of the original plan he made the exploration of the whole site, beginning with the highest part of the city, the object of investigation. For this new task, into which Humann entered with great energy, Richard Bohn was secured as architect in 1880. He had won his laurels at Olympia and in Athens (Chap. XI); he now came to reside at Pergamon. With him co-operated the architects Hermann Stiller and Otto Raschdorff and the archæologists Karl Schuchhardt and Ernst Fabricius. The "German House" situated in the Greek quarter at the foot of the hill was for years the scene of busy and happy activity, at times enhanced by the visits of colleagues and artists. On the cupboard, in the common dining-room, wherein our small library and some bottles of good wine were kept, the inscription *Nutrimentum Spiritus* recalled the great Berlin library of Frederick the Great, and *Litteris et Patriæ* the new University buildings just arising in Strasburg.

The city of Pergamon is built on a series of terraces; the altar occupied one of these. On the terrace above, within the citadel walls and by the abruptly ascending path, the oldest temple of Athene was found, built of brittle trachyte, of the period of the early Kingdom or even earlier. In its spacious court remains of the pedestals of the bronze triumphal monuments of Attalos I were found, of which we can gain an idea from the marble copies identified in the Ludovisi statues in the Capitol (p. 167). The son and successor of Attalos, Eumenes II, who made Pergamon a great city, had, according to Hellenistic usage, surrounded the court with a two-storey colonnade. The famous library of Pergamon occupied its north wing with book-cases for more than 100,000 volumes and a lofty reading-room. On the other side of the ascending path were two larger houses built around courts, according to Greek custom. They undoubtedly formed part of the palace, and in their simplicity indicate the characteristics

of the Pergamene rulers ; a number of more important dwelling-houses, extending over the crest of the hill, are connected with them. From the summit, in a southern direction, all earlier Hellenistic buildings had disappeared, to make room for a great temple built on massive substructures. At first it was supposed to be the temple of the city goddess Athene, then that of Augustus, but was finally recognized as the Trajaneum built by Hadrian.

One prefers to linger over the times before this pompous imperial building existed, when the Attalids gazed from this commanding position over their city and their kingdom extending to the Gulf of Elæa. A marble seat (*Exedra*) found there gives food for these reflections ; it has now been placed before the Pergamon Museum, in Berlin, to brave the northern clime.

To the south, below the altar court, the market terrace with its arcades and shops was discovered, and the unpretentious Temple of Dionysos. Toward the west, below the hillside, extends a long terrace, supported by a lofty wall, and formerly flanked on the outer side by a colonnade, while opposite the theatre climbs up the steep hill, and at the end of the long avenue the eye was attracted by the finest architectural structure in Pergamon, the " Ionic Temple." Here, as elsewhere on the citadel, the grouping of the whole creates an artistic effect similar to that at Samothrace. This artistic effect is most strikingly observed from the western heights beyond the Selinus, to which the citadel, as it were, turns its front. The theatre, above its long terrace, forms the central point ; to the left, above it, is the Temple of Athene, with its court, and at the top the Trajaneum ; to the right the court of the altar, and below it the terrace of the market.

The excavations of the citadel were concluded in 1886 after nine years' labour. The work might have been considered ended. But from the citadel descended

a massive wall surrounding the city of Eumenes; at its lower extremity a gymnasium had been partly excavated at the beginning of the undertaking. Here was scope for work, if the plan of the city was to be studied further. While, under a new directorate, the Berlin Museum undertook other plans, of which we shall speak later, Conze always kept his eye fixed on Pergamon. The great publication devoted to the excavations of Pergamon at times required supplementary information, e.g. renewed examination of the high-pressure waterworks which supplied the citadel. Friedrich Gräber had discovered these in 1886; Karl Schuchhardt had followed up the discovery by tracing the conduit to the Madaras mountains. But the main task had not yet been completely accomplished. At Conze's suggestion the Berlin Museum renounced the work in favour of the Archæological Institute, and the Government grants an annual allowance of 15,000 marks (£750). Since 1900, under Dörpfeld's wise leadership, excavations have been carried on at Pergamon for several months every year. Their reward has so far been: the main entrance gate to the city, a lower market-place, a copy of the Hermes Propylæos of Alkamenes (Chap. II), and a gymnasium of Roman times. A Russian architect Sergei Ivanoff left a fund in 1877, part of which was employed in 1905–6 to dig on some of the tumuli below the town, which are so characteristic of the plain. The largest still awaits excavation, two smaller ones were opened in October, 1906, affording a holiday for the surrounding population. In each tumulus was found a sarcophagus of trachyte, containing a skeleton crumbling to dust. Some small offerings were in the first.

"When on the second day the lid of the sarcophagus was raised" (thus writes an eye-witness) "an exclamation of surprise passed through the assemblage, for a gold wreath met the eyes of the beholders. The dead warrior

had evidently been a man of massive frame wearing a sword and spurs. The design of the gold wreath consisted of oak leaves and acorns; at the point where the two branches met there was a delicate little nude Nike holding a wreath. It was a beautiful work weighing 400 grammes. But of greater importance than these objects is the general idea gained of the burial of a man of distinction during the times of the Kingdom. I almost felt ashamed to see the people congregating about the sarcophagus and disturbing one who here had made history. Science is an unpleasant trade."

But another thing remained to be done. After former excavations, when the site had been completely excavated, it was left in that condition. And when it was only a question of removing sculpture or inscriptions this sufficed; when, however, it became of importance to reconstitute the entire scene of a site which had been uncovered, its preservation became an imperative duty. In Greece, in former times, the care of monuments had been entrusted to old soldiers, who guarded them in a careless manner. It now became expedient to entrust the care of antiquities to a staff of custodians under competent supervision; as, for example, at Olympia, where Greek caretakers were appointed immediately after the conclusion of the excavations; the same has taken place at Delphi and other places. Hamdy Bey, the director of museums and excavations at Constantinople, experiences greater difficulty in Turkey, particularly in more remote places. Marble is of use in making lime, and hewn stones are wanted for building; even the lead of clamps in the walls is the cause of their frequent destruction. Conze found in Samothrace, after two years, that a great deal of what had been uncovered was either destroyed or carried off. The Temple of Zeus Sosipolis at Magnesia was destroyed soon after it had been excavated; stonemasons began making steps of

the newly uncovered architectural remains of the Temple of Athene at Priene. And when an Englishman accidentally found a few coins and a gold olive leaf under the partly destroyed base of the statue of the goddess, which had been deposited when the foundations had been laid, the vandalism of the villagers seeking gold knew no bounds, until hardly one stone remained upon another. Blocks with inscriptions frequently share a similar fate. These barbarians look upon the lettering as a magic charm, by the knowledge of which Europeans know how to acquire the hidden treasure, while those in ignorance of this knowledge must destroy the stone to gain the treasure. All must be doubly safeguarded here. The guardians placed here and there by Turkish authorities do not suffice; at Priene they were even discovered in the act of destroying the marble walls of the market-place, as they had run short of lead for their muskets. Prussia has therefore placed its own guardians at Pergamon, and keeps them at its own expense and in its own house; the same is done at Priene and elsewhere. It still remains to raise funds to make these permanent. The example should be followed everywhere, when it is a question of preserving for future generations in an intelligible and clear form the records regained from the earth of the history of cities and their art.

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Pergamon is situated in the midst of the northern section of the coast of Asia Minor, once settled by Æolian Greeks. The district continued to be investigated. Thus the substructure of the Pergamene theatre terrace, which consisted of several storeys serving as magazines and shops, induced Bohn in 1886 to make a thorough investigation of the Æolian district of Ægæ (Nimrud Kalessi), discovered in 1881 by Salomon Reinach, and examined two years later by Michel Clerc. Here a

similar structure supports and bounds the abruptly descending side of the market-place. That a favourite architectural motive of Hellenistic times had been discovered was demonstrated by another building in the Carian town of Alinda, compared by Ernst Fabricius.

The same characteristics were not wanting in the Æolian town of Assos, situated on a height on the south coast of the Troad, excavated by the American Archæological Institute, and the architects Joseph Thacher Clarke, Francis H. Bacon, and Robert Koldewey, 1881–3. Besides the ancient Temple, the plan of the city attracted special interest, for it climbs up the steep rock on narrow terraces. The old proverb runs: "Go to Assos if thou wishest to leave thy life early." The market-place offered a vivid picture of the plan of a Hellenistic city, with its simple town hall of one storey, halls of one and two storeys and with one and two naves, a temple, baths, and gymnasium. It was not until twenty years afterwards, that an important work giving these details was made public.

Some other investigations on Æolian soil may here be mentioned, although not all pertain to city plans. The architect Robert Koldewey, supported by Berlin art patrons, examined in 1889 the ancient little town of Neandreia, situated north of Assos. From its elevation the entire Troad and Bezika Bay are visible. Of the greatest interest here were the remains of a very ancient temple with two naves; a type at that time little known, but which has frequently been found since. The columns showed a form of capital which Clarke and others had already observed, and which appears to be confined to Æolian territory; the volutes which lie horizontally in an Ionic capital unroll here vertically, as in the capital of an Ionic pilaster. Koldewey tried to combine with this a more artistic piece, recalling late Persian capitals, but it would rather appear to be an independent capital

belonging to other columns. Koldewey, at the direction of the German Archæological Institute, travelled in 1885–6 in the island of Lesbos, once the chief centre of Æolian life. Of architectural remains of earlier periods only scattered traces were found here and there, and some ancient city walls; but at Messa on the Gulf of Kallone, Koldewey excavated the remains of a great Ionic temple; this find proved of importance, inasmuch as the temple appeared to belong to the first half of the fourth century, and thus antedates the Ionic temples known in Asia Minor. Another great Ionic temple, the Smintheion, on the coast of the Troad, had been discovered in 1853 by Captain T. A. B. Spratt. R. P. Pullan examined it in 1866, but some parts were not quite clearly understood. Although the structure may have originated in the fourth century, when Scopas made the Apollo Smintheus for the temple (Apollo watching a field mouse), it seems to have been completely rebuilt in Roman times. As long as these conditions are not yet quite clear, the temple with some peculiar details is not as important for historical sequence as it otherwise might be.

The French School began another task on the Æolian coast. Edmond Pottier, Salomon Reinach, and Alphonse Veyries began in 1880–2 excavating the necropolis of the maritime town of Myrina, the site having been placed at their disposal by its owner Aristides Baltazzi. The chief result was a great number of terra-cottas of Hellenistic times. Compared with those found at Tanagra (Chap. IX), they display the freer, more coquettish, and picturesque style of later times combined with characteristics of Asia Minor. Motives of the Praxitelean age appear, transformed by this more modern taste, and many new motives have been added, so that we can judge better of the originality and the spirit of sculpture in Hellenistic Asia Minor in these figurines and groups, than in most of the greater sculpture preserved to us.

The exhibition of this find at the Louvre and its publication by the discoverers give authentic evidence of this. Unfortunately forgers both at Smyrna and in Athens developed a flourishing trade in these "Terra-cottas from Asia Minor," frequently made with great skill, and deceiving the confiding art lover.

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In the matter of the investigation of cities, to which Berlin owes its Pergamene treasures, new plans were organized, in 1889, after Reinhard Kekulé had taken the place of Conze. More thorough investigations of the southernmost strip of Ionian country, the district about the winding Mæander, were planned. It had been the scene of several earlier attempts at its important cities of Magnesia, Priene, and Miletos. Magnesia, on the Mæander, is well known in the history of art on account of its great Temple of Artemis of "the white mountain" (Leukophrys). It had been built toward the end of the third century by Hermogenes, the most distinguished architect of that late age in Asia Minor, and was admired as a model structure. In consequence of Charles Texier's negotiations, in 1843, the Louvre had become possessed of nearly seventy metres of its frieze with battles of the Amazons. At that time one felt inclined to date Hermogenes about the time of Alexander, and keen disappointment was therefore felt in regard to the monotony of the work carried out in a mechanical manner with trite motives. But when in 1874 Gustav Hirschfeld studied some slabs of a similar style in Teos, from another temple by Hermogenes (these had been discovered by Pullan in 1862, and some had been removed to the British Museum), the date of Hermogenes had to be placed later, and the value, at least of the plastic decorations of his temples, decreased. In any case, it became desirable to study Hermogenes as an architect, and in other respects in-

vestigations in Magnesia promised useful results. An inquiry made by Olivier Rayet and Albert Thomas in 1873 did not add much to our knowledge. The German Archæological Institute in 1890 sent Friedrich Hiller von Gärtringen and Otto Kern to make an attempt; the former excavated the theatre at his own expense. As the results were satisfactory, the Berlin Museum sent an expedition in the following years, 1891–3, consisting of Karl Humann—who in the meantime had been made director of a museum—the architect Rudolf Heyne, and the philologist Otto Kern, who gathered a rich harvest of inscriptions. The precinct of the Temple of Artemis and the market-place with the small Temple of Zeus Sosipolis formed the chief objects of research. The latter is a peculiar structure, the front an open colonnade, while the back was built in antis. The search was made most difficult by constant underground water. The market-place surrounded by halls, with double naves, proved an inexhaustible storehouse of inscriptions, which evidently had covered the walls of these halls. Of great importance was the discovery that the entire complex was of uniform design, and was therefore all the work of Hermogenes, dating from the two last decades of the third century. As Hermogenes is one of the chief sources of Vitruvius, and soon became an authoritative guide for Roman architecture, it was all the more desirable to study a larger example of his work. The Temple of Artemis, in fact, showed an extraordinary ground-plan: a small Cella, and in consequence a deeper Pronaos; before the Pronaos and Opisthodomos were partitions with a door such as may be found in the Egyptian Hypostyles of the Ptolemies. The front had eight columns, the central intercolumniation was rather wider, which latter novelty continued in favour. The plan of the temple cannot exactly be looked upon as novel, it being Pseudodipteros with a wide colonnade; the latter had

once been covered in wood; ancient Sicilian temples had displayed this form, and the Temple at Messa (p. 178) exhibited it also; later it became more general. The huge columns are very slender with comparatively small capitals (the shrinking of this important architectural part is even more evident in the contemporary Doric). The whole is striking rather than beautiful, and corresponds with the purely decorative frieze. Three doorlike windows in the pediments were a tasteless innovation; as the pediments had not the usual sculpture they seemed to require some other break in the great surface. On the whole, we have gained through this excavation a far more vivid idea of the Asian Ionism of the Hellenistic age, as represented by Hermogenes; it can be studied in the Architectural Room of the Pergamon Museum in Berlin, side by side with other remains of Asia Minor. The sculptured remains of the great Altar of Magnesia are instructive, inasmuch as they teach us that the Ionic sculpture of Southern Asia Minor differed widely from the art of Pergamon with its baroque tendencies; it has less animation, and in consequence less force. In so far as the formation of the folds and certain technicalities in these sculptures are identical with those of the Venus of Melos, they may help to settle the perplexing question of its date (p. 51).

Humann and Kekulé directed their thoughts from Magnesia further south to Priene; in the precinct of this city had been the common sanctuary of the twelve Ionian cities of Asia Minor. The work was begun by Humann in 1895, but the following spring he succumbed to a long illness against which he had bravely fought. His place was taken by Theodor Wiegand and Hans Schrader and the architects Rudolf Heyne and William Wilberg. The work continued until 1899. Nor was this entirely virgin soil. The Temple of Athene, dedicated by Alexander the Great, had figured in text books since Revett's

survey as a norm of an Ionic temple. But it was only completely uncovered by Pullan in 1866, who gained valuable results. Before these had been published, in 1881, the architect Albert Thomas—who with Olivier Rayet, in 1873, excavated Miletos and its surroundings through the generosity of the brothers Gustave and Edmond de Rothschild—made use of Pullan's results and published them in 1880 in a work on Miletos and the Latmian Gulf, a work never completed. Although this temple had apparently been well known, it remained for Hans Schrader and his colleagues to establish the fact that it never had possessed a frieze, thereby differing from the regular Ionic style. In the Hall of Architecture in the Pergamon Museum in Berlin, the design of the Temple of Priene may be compared with that of the Temple of Magnesia, and it may be observed how far the former exceeds the latter in workmanship and delicacy of outline.

Far more important results were attained by the excavation of the city of Priene than by the re-examination of the Temple. The situation of Priene is extraordinary ; it resembles Delphi in so far as the rocky ground upon which the city was built ascends steeply, and above it towers the precipitous castle rock 371 metres high, only accessible by a giddy bridle path. As at Delphi and Cnidos it is only possible to build by means of terraces. And yet Priene as well as Cnidos were planned in the fourth century, according to a strict system of rectangular streets : the six long streets west to east are, with only a slight elevation toward the middle, almost level ; while the sixteen north-to-south ones are very steep or actually flights of steps.

The terraces are supported by great retaining walls ; while in earlier times a wall was made to appear as a smooth unbroken surface, now each hewn stone, according to the incrustation style, is tooled so as to remain distinct.

The Temple of Athene Polias is upon an elevated terrace. Steep steps descend from it to the market-place below, the central point of the city. This adjoins the main street, with an altar in the centre, and is surrounded on three sides with colonnades behind which are shops. Ascending upon the north side there is a covered walk leading to a great "Sacred Hall" with two naves, used for festive rites, and other civic buildings; as, for example, a theatre-like hall and offices. From the covered walk a view could be enjoyed of the market below. So complete a picture of a market-place had nowhere been uncovered. A fish and a meat market were situated rather off the main street. The Temple of Asklepios and other sanctuaries, scattered about the city, show that here too there was no monotony. Upon the heights the theatre is situated with a remarkably well-preserved stage—a most instructive building; below it a stadion and gymnasium, and finally city walls surrounding it all with three well-preserved gates; the East, West, and a third one leading to a spring before the city. An excellent water supply within the city supplied all the public fountains, and provided for the cleaning of the streets and the wants of private dwellings.

Besides the Temple of Athene, the market and the ground-plan—no other had been so extensively excavated in any ancient city—many of the private houses aroused great interest, belonging mainly to the third and second centuries. While in Pompeii the Italic house with Greek accessories prevails, in Delos there are chiefly small Greek houses, beside those of Italic type, Priene shows the purely Hellenistic house in numerous examples.

The normal house corresponding to the description of a Greek house by Vitruvius was not absent. The essential feature is still the main part of the Homeric house (Chap. VIII); a paved court, from which a vestibule leading south opens into the main apartment; about the

court are sleeping and living rooms, also an Exedra looking on the court, and a bathroom is not wanting. But beside the normal house there appear many variations of the main idea—an open court (*patio*) surrounded by apartments—according to space, means, and requirements even in private dwellings. Some evidence still remained of the interior arrangement of the houses. The walls show an imitation in stucco of incrustation. A great number of terra-cotta figurines adorned the rooms, representing Aphrodite and Dionysos or scenes from daily life. In this modest country town of 5000 inhabitants, clay and iron took the place of bronze, which was used in wealthier towns, although the latter is not quite absent here. Thus a bronze bedstead (now in the Berlin Museum) appears to advantage by its tasteful simplicity when compared with a richer one (also there) found near Pompeii. The excavation at Priene furnishes one of the most valuable contributions to our knowledge of the Hellenistic city.

As soon as Priene had been regained for science, the directors of the Berlin Museum directed their activity to Miletos, on the other side of the Mæander. The constant floods of the river have changed the land completely. The Latmian Gulf has become an inland lake, the peninsula of Miletos, with the Island Lade before it, has become an inland portion of a marshy plain, which frequently is exposed to floods. Excavations can only be carried on under the greatest difficulties. Olivier Rayet and Albert Thomas experienced these in 1872–3 when they began work here; the chief results then were the theatre situated against a hill and part of a street of tombs with an antique seated figure. Theodor Wiegand in 1899 began the task with such skill and energy that he undoubtedly acquired a foremost rank among modern excavators. The architects who assisted were Hubert Knackfuss, George Kawerau, Julius Hülsen, and the

epigraphists C. Friedrich, W. Kolbe, A. Rehm, E. Ziebarth, and the archæologist A. von Salis. Through the generosity of Georg von Siemen and other patrons in Berlin, Wiegand has been able to acquire a great part of the site of Miletos, and continued to work it systematically from year to year. Excavations continued on the massive theatre, a great Roman structure upon older foundations, where the " Jews faithful to the Emperor " were entitled to special seats near the Emperor's box. The two-storeyed Nymphæum is also Roman, with its niches, columns, and coloured marble, a fountain and statues, a type of building frequent in Asia Minor. Roman is the great market gate leading to a huge square, surrounded by colonnades; its baroque architecture has partly been restored; great Roman Thermæ completed the whole. From Hellenistic times dates the market near the harbour. The entrance of the harbour, now filled with marsh, is guarded by two marble lions. In the market-place remain interesting traces of the town hall, the design of which has been completely restored by Knackfuss. An impressive grave site was discovered within a court, surrounded by walls with a gate and columns, evidently the tomb of an honoured citizen. Behind this was a council hall, as in Priene, in theatre form, and accommodating five hundred persons. The Temple of Apollo Delphinios near by is also Hellenistic; its walls and marble slabs housed the civic archives.

If traces could be discovered of the more ancient Miletos, the splendid centre of Ionian life and trade, destroyed during the Ionian Revolt, how far more important this would be! Some traces of old Ionic architecture have recently come to light at the Delphinion and at the Temple of Athene. It is, however, doubtful whether anything remains of early Miletos but tombs; but there, at least, we may hope for some archaic sculpture. Such vestiges have been discovered in a late antique fortress

wall, whereas at Olympia and Pergamon these had been preserved down to our times; remains of sculpture, architecture, and inscriptions had in barbaric fashion been built into the wall.

At the southern corner of the peninsula which formed the territory of Miletos, at Didyma or Branchidæ, was the sanctuary of Apollo Philesios, the so-called Didymaion, which Herodotus mentions with the Temple of Artemis at Ephesos and the Temple of Hera in Samos as among the largest temples of his time. Revett had during his two days' stay in 1765 copied some details, but had not been able to make a complete plan. This had been attempted with some success by Sir William Gell and the architects J. P. Gandy and F. Bedford in 1812 by order of the Society of Dilettanti. Texier, in 1836, did not add much to the solution of the problem, and Newton, in 1858, was content simply to remove to London the seated statues from the "Sacred Way" (leading from the harbour of Panormos to the temple, p. 101).

Rayet and Thomas, in 1872–3, finally began excavating the temple and established its plan. On account of the enormous size of the temple (evident from three remaining columns 65 feet high) the chief apartment was not a covered cella, but consisted of an open court surrounded by pilastered walls. The statue of the god, the archaic work of Kanachos, was probably placed here in a special shrine. Here also had been the olive tree under which Zeus and Leto had sat, and a sacred spring. It was unfortunately impossible to excavate the central apartment, the Chresmographion (writing-room of the oracle), as a mill and other buildings covered it, which the owner refused to dispose of. Rayet's unfinished investigations of 1895–6 were continued by his friend Bernard Haussoullier and the architect Emanuel Pontremoli; but they were unable wholly to overcome these difficulties. However, they excavated the front of the temple with its ten

columns and its peculiar approach. The bases of the great Ionic columns are richly, if not tastefully, decorated. The temple proved to be of late date, extending from the time of Alexander into Roman times. Nevertheless, on account of its extraordinary size ($49\frac{3}{4} \times 108\frac{1}{2}$ metres) and its technical peculiarities, it is most gratifying that Wiegand succeeded in 1905 in acquiring the mill and the surrounding land. As at Delphi, so here, the entire village of Hieronda had to be bought and pulled down ; it has, in consequence, become possible to continue work on broader lines. It is therefore to be hoped that, in connection with the excavation at Miletos, the Didymaion will at last be thoroughly and satisfactorily investigated.

Looking from Miletos past Cape Mykale one can perceive the island of Samos, another great centre of Ionian life. Herodotus mentions its three most remarkable structures : the harbour, the tunnel piercing the town hill, and the Temple of Hera. There still remain in the water foundation walls of the great mole in the harbour. The great city walls extending into the country from the west of the hill are in a good state of preservation, but have not yet been examined. Presumably during the sixth century, under the tyrant Polykrates, a tunnel was made through this mountain ridge to bring spring water into the city. This tunnel was cleared for more than 1000 metres, in 1882, by two Samian abbots. It corresponded to the description given by Herodotus, and showed that the tunnelling had been carried on (as had been done earlier in Jerusalem under King Hezekiah) from the two sides simultaneously. The two halves did not quite meet, but in the absence of compass and theodolite the achievement is a notable one, for the error could be adjusted with a slight bend in the middle.

Less successful are the results in the case of the Temple of Hera, although it can be dated back to the seventh century, and the names of the ancient architects Rhoikos

and Theodoros were connected with it, so that any knowledge of it would be of the greatest significance for the history of early Ionic art. Since the days of Revett an unfluted column and the massive egg moulding of its capital had been known. Paul Girard, who acquired the statue of Hera, dedicated by Cheramyes, for the Louvre, attempted in 1879 by two months' work to complete a plan of the temple, but failed ; he assigned seven columns to the temple. In 1883 Michel Clerc resumed the work, but with little success, and yet as far back as 1862 Karl Humann had assigned eight columns to the temple with different intercolumnar intervals, which diminished equally towards the corners on both sides. Great difficulties were encountered in consequence of the Government of the island being opposed to the demands of the foreigners. The Greek Archæological Society finally overcame these difficulties in 1902, and began under the direction of a Samian archæologist, Themistoklēs Sophúles, to excavate the temple. It is not merely on account of the difficulties experienced by reason of the climate, but, above all, through the lack of experienced and competent architects, that expectations have not been realized in these excavations. In any case the plan of the temple is known and its great extent established. Somewhat larger than the Didymaion ($54\frac{1}{2} \times 109$ metres), it showed the extraordinary proportion, in a temple with only eight columns, of the width to the length 1.2.

Besides, certain important details had been found, as, for example, part of an Ionic capital, which in the massive severity of its foliage recalls the capital of the column of the Naxians at Delphi.

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The Berlin Museum had the zealous co-operation of Austria in these investigations of ancient cities ; for Otto Benndorf had taken in 1877 Conze's place at the museum

in Vienna, and promoted all archæological work. His undertaking took a course like that at Pergamon: a single work gave the motive, but extensive investigations followed. Lycia formed the first objective. While Fellows and Spratt (p. 96) were travelling there in 1841–2, a German schoolmaster, August Schönborn, had wandered about the country alone, and in a remote region had come upon a large monument; and the great beauty of the reliefs induced him to write as follows: "I had the Trojan war before my eyes, Homer's creatures represented in antique art, and I confess I could not take my eyes off. In the corner of the west side, the relief represented Achilles seated 'with wrath in his heart' near the high prow of his ships, his head resting upon his hand. Next comes a herald calling the assembly together, warriors and battle scenes follow, the battle approaches the city, fighting continues at the gate, a company of elders are seated above the gate; thus one picture after another reveals a wealth of life portrayed with Greek assurance in the groups, in the movements, and in the proportions of single figures. I do not hesitate to say that the reliefs, placed at a proper height, would be an ornament to any museum, no matter how rich it may be."

After his return Schönborn tried in vain to induce the Prussian Government to send an expedition to remove the treasure. His notes were only used by Karl Ritter in his voluminous book on Asia, where again they lay hidden until I made use of them, sixteen years later, in 1875, in elucidating the Nereid Tomb. Benndorf now turned his eyes toward this monument. In April, 1881, he and George Niemann, who had both taken part in the work at Samothrace, undertook a journey of inquiry upon an Austrian man-of-war. They landed on the steep south coast of Lycia, at Kékova, and directed their steps at once to the elevated region of Giölbashi, where, according to Schönborn, the monument was to be found.

Benndorf writes: "The ascent of a steep rarely used path amid summer heat was very laborious. We arrived late and exhausted upon the border of the plateau 1800 feet high, from which we were able to recognize in the distance the heights of Giölbashi. We increased our exertions, and when we arrived on the ridge of the steep mountain could recognize the ruins of the city described by Schönborn, and soon perceived at the east end of the Acropolis the long bands of a relief, which we knew must belong to the Heröon. I ran ahead, and worked my way breathlessly through thorn bushes and underwood towards the entrance gate, which opened in the wall at some distance from the steep slope. I climbed up the joints of the wall to the threshold of the gate above, and found myself within the ruins suddenly confronted by a mass of sculpture. Overshadowed by tall trees, and half-buried in abundant vegetation, it presented a marvellous sight, in the splendour of the sinking sun. I confess that among the most impressive moments of my life were those in which I first gazed upon the now happily attained goal of my prolonged efforts, amid the solemn tranquillity and solitude of nature, while around me lay a vast and majestic scene of mountain gorges and wild crags, bounded by snowy peaks and a broad expanse of sea."

It remained to acquire and secure the treasures thus happily found.

Upon Benndorf's suggestion a society was formed in Austria of generous art patrons, who combined to supply means for an expedition, while the Government lent a man-of-war. It was possible thus to begin work in 1882. Benndorf and Niemann were joined by Eugen Petersen, then in Prague, and among younger men by Emanuel Löwy and Franz Studniczka; and the engineer Gabriel von Knaffl furnished most valuable assistance. For a high road had to be constructed near the steep ravine of

the river Myra, upon which the heavy blocks from Giölbashi, about 600 metres high, could be transported down to the river. The Heröon of Giölbashi is the court of a prince's tomb, dating from about the time of the Peloponnesian war; its freestone wall at the entrance and all four walls in the interior were adorned with a double border of bas-reliefs. These revealed a collection of mythological scenes of, till then, unrivalled variety, for which Lycian sculptors with a Greek training had derived their inspiration from an abundance of examples and reminiscences, like the sculptors of the Xanthian Nereid monument, but in a far more spirited and picturesque manner. The general interest in this composition increased through Benndorf's demonstration that it suggested motives of Polygnotos. Had they been directly borrowed from the great Master of Thasos, or were they a common heritage of Ionian painting? From this remote corner of the Lycian mountains important problems, in the history of Greek art, hardly as yet touched upon, were suddenly unfolded.

The reliefs were sent to Vienna, and soon appeared in an elaborate publication. By the acquisition of the Heröon the object of the expedition was, however, by no means fulfilled. The reports of Fellows and the description of Spratt still formed the main sources of our knowledge of Lycia, but were too amateurish to satisfy strictly scientific demands. Benndorf and his companions began a re-examination of Lycia and a great part of Caria. One result was an increase in our geographical knowledge of these countries. Heinrich Kiepert supplied the expedition with sketch maps, and its results were incorporated in his new maps. Further, the chief known cities of Lycia, Xanthos, Pinara, Tlos, and Myra were carefully inspected and others discovered. The small town of Kragos-Sidyma, in the southern part of the Kragos Mountains, was carefully investigated. The results

were so illuminating that Mommsen made use of them, to describe a provincial town in Asia Minor.

" Upon a remote mountain top near the Lycian coast, where, according to Greek myth, the Chimæra dwelt, lay ancient Kragos, in all probability built of logs and clay bricks, and therefore it had disappeared without a trace, excepting the cyclopean fortress walls at the foot of the hill. Below the summit expands a delightful valley with fresh alpine air and southern vegetation, surrounded by mountains covered with forests. When Lycia became a province under the Emperor Claudius, the Roman Government transferred the mountain-city, the ' green Kragos ' of Horace, to this plain. In the market-place of the new town of Sidyma there still remain traces of the four-columned temple which had been dedicated to the Emperor, and a colonnade, built by a citizen who had acquired a fortune as a physician, and who built it for his native town. The market was adorned with statues of the emperors and of distinguished citizens ; in the town was a temple of its patron-divinities Artemis and Apollo. There were baths and gymnasia for older and younger citizens ; outside the gates along the main road, which descended precipitously from the hill to the harbour Kalabatia, on both sides there were funeral monuments of stone, finer than those at Pompeii, and in great part still upright, while the houses, built probably like those of the ancient town of perishable material, have disappeared."

In the plain below Xanthos it was possible to trace the sanctuary of the Confederacy of the Lycian League, which had enjoyed a great reputation in ancient times on account of its good regulations.

But, above all, Lycia is the country of tombs. The different models were carefully examined, in particular the national Lycian ones, the high pillar tombs with and without reliefs ; those, whether carved in the face of the rock or standing free, which copied in stone wooden-frame

buildings; those family tombs of several storeys formed like a pillar and decorated with reliefs, their roof appearing like the bottom of a boat turned upside-down, while in reality its form seems to be taken from an arbour.

Not till the fifth century does Ionic architecture appear. But the later tombs are also noteworthy. Most conspicuous is the Heröon of Opramoas at Rhodiapolis, dating from the second century, quite covered with inscriptions, which form the family archives; and there still remain fragments of sixty-four records.

Roman remains predominate, on the whole, in Lycia, as in the rest of Asia Minor (the Roman province Asia was called the country of five hundred cities); for during centuries of peace the country experienced great prosperity. The English expedition had taken the choicest pieces of the sculpture of earlier times, and it only remained to supplement these scientifically. The results of the Austrian expedition were rapidly published in two standard volumes, and made accessible for all scientific purposes.

One of the patrons of the Lycian expedition was the enthusiastic art lover Count Karl Lanckoronski. Interested by these events he travelled in Pamphylia, which adjoins it on the east, and decided to prepare personally an expedition to investigate this unknown country; for the great work on the southern countries of Asia Minor by the French architect P. Trémaux lay unknown and unused in a few libraries. Lanckoronski chose Eugen Petersen and George Niemann to assist in the carrying out of his plans, and in 1884 a trial journey was undertaken.

Excavations were not attempted; the aim of the journey was to gain a more thorough knowledge of the towns in the maritime region of Pamphylia, and in Pisidia, the mountainous country extending northwards.

With these plans Petersen and Niemann went in 1885 to Adalia. Besides examining Adalia (where are the remains of a fine gate of the time of Hadrian) they turned their attention to Termessos, which is situated above it to the west ; then to the long plain along the coast rising in terraces above the sea, where the cities of Perge, Sillyon, Aspendos were situated, each of which is recognizable from a distance by its flat-topped Acropolis. Lastly, toward the east they visited the seaport of Side. What was aboveground was surveyed, and it was possible nearly everywhere to acquire the general outlines of the plan of the city, and by that means to study the development of these historically little-known places. The well-preserved Roman model theatre in Aspendos, which had been examined by Texier and Schönborn, formed an object of interest. The Nymphæa so frequent in Asia Minor next attracted the attention of the travellers ; their plans were similar to those of the former Septizonium of Rome, and could conveniently be studied here.

From Pamphylia they ascended the steep gorge of the Eurymedon to the rugged mountains of Pisidia which form the transition to the high plateau in the interior of Asia Minor. Nor were cities wanting here : Selge, Kremna, Sagalassos. At times, space for a city had only with difficulty been gained on the steep rocky soil ; and again, as at Kremna, a level plain had been utilized, where to-day the remains of a Roman city can still be traced, with its temples, markets, halls, and theatres. Some of the temples with their peculiar architecture testify to the more baroque style of the second century A.D. Numerous tombs exhibited a great variety of forms. The expedition proved thus very successful in extending our knowledge of what had been the significance of the Empire to Asia Minor, even to so wild and remote a district as Pisidia. A brilliant publication issued by the generosity of Count Lanckoronski and the skill of Nie-

mann, with a full and clear text, formed a noble memorial of this journey.

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It had been decided, in Vienna, to collect again the inscriptions of Asia Minor, so as to take over part of the work of the new Berlin Corpus of Greek inscriptions. With this object Rudolf Heberdey, Ernst Kalinka, and other younger scholars were sent to Asia Minor to travel, geography and archæology profiting at the same time. They extended their journey to Cilicia; the Scotchman W. M. Ramsay had travelled, during the eighties, repeatedly through the interior of Asia Minor, and numerous members of the French School at Athens carried on here and there similar investigations. The Austrian scholars kept their eyes fixed on Asia Minor, and in 1895 Otto Benndorf selected Ephesos for more extended archæological investigations. These excavations were begun in 1896 with the aid of Austrian lovers of art; and later, after the establishment of the Austrian Archæological Institute in Vienna, in 1895, were taken over and continued by the Institute.

Ephesos had been as important a city of Ionia as Miletos and Samos, and survived the other two. But the same forces of nature as in the valley of the Mæander had from the earliest times separated the city more and more from the sea which originally had washed its hills. In consequence of the inundations of the Kaystros, first the oldest city with the Temple of Artemis, then the Hellenistic city, and finally the Roman one had disappeared into the soft marsh—one city after another had followed the retreating sea-coast—and only a few remains, chiefly upon the rocky heights—above all, the great city wall of Lysimachos—testified to former grandeur. When, therefore, in 1862 E. Falkener tried to reconstruct the ancient city, where years before he had

spent a fortnight, it could only be a fantastic picture. Ernst Curtius also failed in his attempt to connect the history of the city with the localities, through insufficient evidence. Only the Temple of Artemis had been identified by Wood's excavations. In 1895 Benndorf and Humann examined the ground thoroughly and projected new plans; a firman was secured, and the ground required was purchased. In 1896, with Benndorf's co-operation, the excavations of the Hellenistic Roman city began, between the rocky heights and the low-lying coast; the harbour of the latest period can clearly be distinguished here in the marshes. The work is now annually continued under the able guidance of Rudolf Heberdey and the architect W. Wilberg. The Roman market-place forms the central point. The chief features of the city, which is Roman rather than Hellenistic in character, are colonnades, with columns placed before walls; arcades, and a peculiar three-cornered two-storeyed hall which forms the connection between a street and a square. A library of several storeys, in which niches in the walls show where the bookcases had been, is decidedly different in plan from the one at Pergamon. A number of single finds were made—a bronze of the fourth century (which we shall meet again in Chapter XI) had to be pieced together out of 234 fragments.

In all the excavations made in Asia Minor the great distinction to be kept in view is between the Hellenistic and the Roman. The first predominates in certain places, as Pergamon, Magnesia, Priene; but on the whole the peaceful times of the empire seem to have covered this earlier stratum. Thus the great majority dates from Roman times. Here may be mentioned an expedition undertaken by Conrad Cichorius and Karl Humann, with the assistance of Franz Winter and Walter Judeich, in 1887 to Hierapolis in Phrygia; they were unaware that Trémaux had surveyed it. The hot springs

to which the city owed its renown had formed lime deposits of enormous extent, upon which the remains of a Roman city—partly covered in its turn by later deposits —may be recognized. A broad street with colonnades traversed the city in a straight line from one gate to another, intersected by the other streets at right angles; traces of the agora are connected with it. Extensive Thermæ, two structures which may be termed a Basilica and an Imperial Lararium, according to Pompeian analogies, and above the town a well-preserved theatre may be recognized, nearly all in a late and clumsy style of architecture. Outside of the city walls an incredible number of sarcophagi and tombs are crowded together, from which the ruins have acquired the native name Tambuk-Kalessi—a "city of troughs." The entire site affords a striking picture of the inexhaustible forces of nature overwhelming the habitations of men. One is reminded of the medieval town of Ninfa on the Volscian hills; only there the water and the luxuriant vegetation produced by it caused the devastation, while in Hierapolis it has been accomplished by the calcareous incrustation of the stream.

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The investigation of two Greek islands was connected with the quest for inscriptions. Baron Hiller von Gärtringen had undertaken to prepare the latter for the Berlin Academy. Preparatory work took him to Thera, and it was not surprising that the island exerted such a charm over him that he decided to extend his investigations over the entire island.

Thera, now called Santorin, is a solitary volcano rising out of the sea. The crater has been pierced at three places, and the sea has entered and filled a basin nearly 400 metres deep. This crater-lake is surrounded by precipitous walls, which with their variegated hori-

zontal strata attain a height of 360 metres. The old city of Thera was situated on the eastern outer slope of the island, upon a limestone mountain towering 567 metres above the island. A marvellous picture is unfolded to the eye. The surface, descending from the edge of the crater to the sea, is covered with a thick white layer of pumice-stone, on which low vines form a carpet-like pattern. From the upper edge deep furrows descend, caused by heavy rains, and cross this flowered carpet in dark streaks; in the walls of these clefts wine-cellars, wine-presses, and even human habitations have been hollowed out. Where the pumice-stone meets the sea it has been gradually washed away, leaving a dark edge which separates the white island from the deep blue sea. In the south extends distant Crete, with its three snow-covered peaks, toward the east is the coast of Asia Minor, and to the north are the numerous and varied islands of the Cyclades. Below in the crater are small newly formed volcanoes and the gently boiling sea, from which even in our times have risen new volcanic cones. Any one who has had the good fortune to look down from the convent of Hagias Elias must have felt his heart deeply stirred by this great beauty.

In 1834 Baron von Prokesch-Osten had discovered upon the rocks of the town ancient inscriptions, which became famous through Böckh's publication. Ludwig Ross soon after visited Thera (1835–7, 1843), and discovered, in the south of the island, remarkable rock tombs and a well-preserved marble sanctuary or Heröon. And in the city above, on the mountain, he noted and described a number of buildings, without, however, recognizing it as the capital of the island. It is to the credit of Hiller von Gärtringen to have brought to light again this ancient city on the rocks. He continued to work here for six years from 1896, defraying all expenses; with him co-operated the architects Dörpfeld

and Wilberg; the archæologists Schiff, Wolters, and Dragendorff, and the surveyor P. Wilski. This remote little town, laid out with terraces and steps on its wind-swept heights, now clearly exhibits again its private houses, public buildings, and sanctuaries. The Doric temple of Apollo Karneios dates back in parts to the archaic period, while a great part of the town belongs to Hellenistic times, partly again covered by a Roman stratum. The narrow little lanes, frequently only stairs, as well as the houses, do not indicate the luxury of Hellenistic times—one seeks here in vain colonnades, so that the stoa near the market-place is a remarkable exception. It had two naves, and served for market purposes, e.g. as a testing-place for weights and measures. The old building had received repeated additions, and was restored in the second century A.D. under the name of a Basilica, proving that this much-discussed name was not confined to the hall-like building with a raised nave, as at Pompeii. In consequence of the proximity of the island to Egypt, Hellenism in Thera received a peculiar character. The Temple of Dionysos was later adapted to the cult of the Ptolemies, and one of the most striking features in this rock city is a sanctuary, cut into the rock, of the Alexandrian trinity Serapis, Isis, and Anubis. Of peculiar interest are the ancient burial-places to the north of windy Selláda—the depression uniting the town with Hagios Elias. The most ancient times and Roman times are represented by a great variety of tombs; while tombs of the Hellenistic period have not been found.

Some plastic decorations of the town both of Alexandrian and of Roman times have been preserved. But, above all, pottery, of many different periods, has been extensively found on the island. Upon the island of Therasia (one part of the volcano) were found, during the sixties, potsherds in the lava. Their archaic decorations caused astonishment, and the problem of placing

them in the classification then current awoke serious doubts.

Thera now provided an abundance of this indestructible testimony of ancient civilization, in an almost uninterrupted series, so that the progress of painting, which in the meantime had been elucidated by much research, could be followed here clearly, particularly its older periods, and its study could be further advanced. A great publication, the united effort of all who had taken part, formed a worthy conclusion to this brilliant work.

The Rhodian expedition of the Danish Society of the Sciences falls beyond the limits of the last century ; this was equipped from the Carlsberg Fund established by Carl Jacobsen. On the old Acropolis of Lindos C. Blinkenberg and K. F. Kinch excavated 1902–4. The island of Rhodes, sacred to Helios, lies furthest east and nearest the sun of all the islands in the Ægean Sea, and of its cities Lindos juts out most boldly into the broad Eastern sea. On its rocky citadel Ross had, in 1844, discovered a number of Greek artists' inscriptions, which seemed to throw light upon the Rhodian school of art. Paul Foucart had made similar discoveries in 1864. With the exception of a more accurate survey of the Temple of Athene, inscriptions formed the main objects of the Danish expedition. Two facts testify to their value. It has now become possible to establish definitely the date and home of the artist Bœthos, the creator of the Boy with the Goose ; and also to settle the much-disputed date of the Laocoon (this had varied from the third century to the time of the Emperor Titus). It has now been placed, with some certainty, in the middle of the first century B.C.

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Let us point out the chief results of these investigations of ancient cities. Two groups can be distinguished according to the situation of the cities. Either the cities

show what we may call a naturalistic conformity to the configuration of the land: the castle hill, the springs, and the courses of rivers, the slope and contours of the ground; or, it may be, the relation to the sea determines the position of the market, the gates, and streets, which are bound by no rules. Or, on the other hand, the entire city is treated as a work of art; the squares and streets are planned according to fixed rules and formulæ, without considering the conditions set by nature. Very popular is this method, which strikes us as so modern, of making the streets cross one another at right angles, in which case the main streets are generally distinguished by their breadth from the narrower lanes. It is not by chance that this second system was not invented by a practical architect, but by an ingenious theorist—Hippodamos of Miletos. The first examples of this method in Periclean times were the seaport of Piraeus and the Attic colony of Thurioi, on the Gulf of Tarentum. In rebuilding the modern Piraeus, in the forties of the last century, it was only necessary to follow the street plan of Hippodamos. We will mention among later plans of this kind only "Beautiful Rhodos," 408 (it was impossible, however, to demonstrate its ancient plan on account of frequent rebuilding); and Alexander's oriental capital Alexandria, 332–1; the rectangular plan of its streets was recovered by Napoleon III's excavations carried out by Mahmud Bey.

Among recently investigated cities this "Hippodamian method" is most strikingly displayed in Priene and Cnidos, near the home of the inventor. In both places the rectangular plan was ill adapted to the very irregular ground, but evidently insisted on, as the entire city site was cut up into terraces. Most of the streets become stairs, so that wheeled traffic could not have been very important in these ancient cities. It has been noted above (p. 182) how imperative the supporting

walls became in these cities. In a modified form this same plan was adopted in Thera with its narrow rocky ledges.

Greater difficulties even than at Priene were experienced in very steep Assos ; while at Hierapolis it was not difficult to carry out such a plan on the level surface of the lime deposits. In Pompeii the system of the city plan is founded on the Italic system, the two main lines crossing each other, the *Cardo* and *Decumanus ;* most completely carried out at Marzabotto. In Pompeii certain irregularities have arisen in consequence of natural conditions, which interfere with the regular system. The cardo had to follow toward the south a diagonal trend of a lava hill, upon the ridge of which most of the city is built, while toward the north-west the Gate of Herculaneum, with its famous Street of Tombs, necessitates a slight deviation from the normal right angle.

The case is quite different at Pergamon. The great height of the citadel and the steep mountain, which the city of Eumenes covered, necessitated an ascending main street (as at Delphi, p. 149) with sharp curves. This main street formed the cardinal feature of the entire plan. How far the city descended on terraces, how far the system of rectangular streets was carried cannot yet be determined. If great irregularities should appear, it would not be surprising. In the upper part, near the citadel, and within it, the streets perforce ascend on terraces. These exhibit no stiff regularity, but adapt themselves to the bend in the main street or according to the configuration of the land. Thus the capital of the Attalids is in great contrast to the Hippodamian cities, and also to Halicarnassos, the capital of the Carian rulers. Here the circular harbour forms a central point to the city, which, like an orchestra, rises in tiers above it, with wide main streets. In one respect Pergamon re-

sembles all cities not situated in a plain: terrace walls were indispensable, and some were of considerable height. The wall below the theatre terrace, several storeys high and 200 metres long, was an important work, evidently forming a model for other cities in Asia Minor.

These strict Hippodamian conditions seem to have been less observed later on. They had been most pedantically carried out at Nikaia, the capital of Bithynia, and strictly at Antioch in Syria. Delos, and most Roman cities in Lycia, Pamphylia, and Pisidia, were planned more according to natural conditions, while, on the contrary, at Hierapolis the regular plan was the result of conditions.

Apart from these distinctions in the general plan, we have learnt to know many details of cities in consequence of recent excavations. The Forum at Pompeii had practically, until of late, been the only city market known to us, while now we are able to follow the gradual transformation of the forum. We have become acquainted with a normal market at Priene with modifications at Assos and Pergamon; a harbour market at Delos, and a Roman market at Ephesos.

The town hall was situated in the market-place; at Assos its council hall was very simple, at Priene it was more ornate and adapted to its purpose, while at Miletos it was most imposing, and stood in an enclosure with other buildings. Colonnades, usually with shops in the rear, surrounded the market as well as the court of the Milesian town hall and nearly all the temple courts. They had either one or two naves, and were one or two storeys high; those at Pergamon and in the Stoa of Attalos II in Athens were very imposing. As many of the market halls were built by kings, they frequently retain their names or the more general designation *Basilica* (hall of the King), a name they share with the enclosed halls (such as the splendid Basilica at Pompeii), which seem copied from Egyptian models.

The streets are frequently paved, as at Pergamon, Priene, and Miletos, and drains have been found—most clearly at Pompeii. The houses were at first completely closed toward the streets, but gradually shops were added in the lower storey, thereby adding animation to the street life. At Pompeii this is very evident, but it can also be seen at Pergamon. But in the recently discovered Hellenistic cities we do not find an extension of the colonnades from the squares to the streets, as is recorded in Hellenistic times of Athens and Smyrna.

Rome had also at an early date these sheltered streets. Later the custom became general. Ephesos is an example, and in Hierapolis the main street had colonnades with shops on either side.

A further requirement of a city would be a theatre; the one preserved at Aspendos is one of a number of fine examples. The Gymnasia were usually courts surrounded by colonnades with different rooms and niches, often separate ones were provided for the older and younger men. Examples are at Sidyma, and notably at Pompeii, where the gladiators' barracks, with their great court, had originally been the athletic ground for adults (corresponding to the Palæstra at Olympia), while the small so-called Palæstra was devoted to the youths of Pompeii, and was thus an Ephebeion. Miletos and Hierapolis, with their hot springs, show us Roman watering-places. The knowledge we have gained of Hellenistic houses at Priene and Delos has been mentioned above; until then we had been limited to Pompeian houses, which are of a peculiar type, as they combine the Italic with the Greek.

Pompeii afforded us the most vivid and touching picture of a Street of Tombs, leading the traveller from the city gate into the country. It dates almost entirely from Roman times. A picture of classic times was obtained when the Athenian burial-ground was un-

covered in 1870 outside of the Dipylon, the main city gate. Many of the incomparable grave reliefs of the fifth and fourth centuries remain here still upright; the aristocratic Hegeso; the Knight Dexileos, who distinguished himself at Corinth, and fell there in 394 at the age of twenty; two rather dignified Greek ladies, Demetria and Pamphile, who look pleasantly at the beholder. These are only single examples of a class of monuments, which in noble simplicity and quiet dignity compares favourably with any other. Owing to the numerous excavations in Asia Minor, our knowledge of these burial grounds has greatly increased. Lycia has long been famed for these, but of late has again been explored with this object mainly in view. While Miletos has yielded some of its archaic seated statues, Pamphylia and Pisidia afford a great variety of different monuments which in part lead us on to the forms which prevailed in the decadence of antiquity; Hierapolis surprises by the monotony of its sarcophagi.

In these investigations of ancient cities the lion's share falls to Hellenistic times. It was that age, however, above all that called for elucidation, at least in so far as its imperishable traces are concerned, for in our literary traditions no other period of Greek history affords such a picture of a confused, desolate heap of ruins. The stones had to speak here, and they have spoken, partly through inscriptions, partly in the remains of architecture and sculpture.

VIII

PREHISTORY AND PRIMITIVE GREECE

FROM the decline of antiquity we may turn our eyes back to its beginnings. It is again the unobtrusive painted pottery which has extended our horizon beyond all formerly known bounds.

The orientalized or Corinthian class of vases, which could be dated back to the seventh century, had long been looked upon as the most ancient. And as the records of Greek artists did not extend beyond this, it appeared to be the beginning of all Greek art. At most, the Homeric poems may have gone back a little farther into a vague and uncertain region, into which the flowery ancient vases or the "studded" bronze shields of the Regulini-Galassi tomb, or some Assyrian analogies, threw a faint light. But, on the whole, we might have said that Greek art began where the Homeric poems ended, and that beyond them yawned chaos.

It was again Conze who first tried to fill this gap. He had published in 1862 some pots from Melos, resembling Corinthian vases, except that besides the orientalized conventional plant-forms (rosettes, palmettes, etc.), there appeared simple linear decorations (zigzags, rectangles, etc.), revealing an entirely different origin. Thomas Burgon had, in 1847, drawn attention to these linear designs, and in 1863 Gottfried Semper had followed this suggestion, but it remained for Conze, in 1870, to distinguish this Geometric style as that of a particular archaic class of vases. Its characteristic is, that the

decorative scheme is entirely linear, consisting of straight lines, zigzags, cross lines, circles, spirals, and meanders, forms evidently taken from the ancient technique of weaving, plaiting, and chasing. These were systematically combined, usually covering the surface in bands, in this respect differing from the art of savages, who make use of many of these elementary motives. The conventional plant motives so common in the orientalized style are absent here, as well as the lions, panthers, sphinxes, and griffins of the Orient.

Where animals are used they are domestic animals—geese, storks, horses at the manger, and so on. In Italy the Geometric style is especially frequent in the incised patterns of metal utensils, and the ornamentation on clay vessels in that country is frequently incised with a graving tool.

It is evident that this was the original method, as the prevailing character of the designs on Greek pottery is rather linear than pictorial. All the decoration—as well as the animals, which serve a decorative purpose—is merely drawn, and the surfaces are filled with linear designs ; a brushful of paint is rarely used.

Such was the appearance of the sixty examples by which Conze demonstrated the Geometric style. As soon as the eye had become accustomed to this phenomenon, their number increased with great rapidity, and our knowledge was extended in two directions.

A great discovery of vases at the Athenian Dipylon in 1871 showed that this linear style was extended to human beings, or rather to schematic representations of them, and indeed, with these simple means, attempts were made at representing funeral processions, naval combats, etc. This more elaborate manner was called the " Dipylon style." Other examples of a more advanced style showed Geometric designs closely connected with lions, flowers, and other characteristics of the orientalized style.

Taken as a whole, it became evident that the Geometric must be older than any known style, and filled the gap beyond the Oriental influence, probably brought in, as in Homer, by the Phœnicians.

Another thing did not escape Conze. This Geometric style coincided in the main, in its decorative schemes, with the ornamentation of the old pottery and bronze implements of Central and Northern Europe.

New and extensive perspectives were opened here. Was the Geometric style a common heritage of the entire Aryan family? Or did it represent a peculiar European expression of Aryan ornamentation? Had it reached Greece from the north, in consequence of those migrations of peoples which we call by the far too narrow term, the Dorian Invasion, and which we usually date in the first century of the last millennium before Christ? This last view has been widely accepted, and still obtains to-day. We may, however, consider later whether another somewhat different view does not deserve more attention (p. 214). At present we must look beyond the Greek horizon into the fields of prehistoric research.

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By the word prehistory we mean research into antiquity before there were any written records. It comprises different sciences, as anthropology, ethnology, and the history of civilization. But these are as foreign to our studies as the questions of currency, trade, and history would be to numismatics. The archæology of art is not concerned with the questions whether the people were dolichocephalous or brachycephalous, whether there was inhumation or cremation, or whether cist graves existed, nor does it inquire into their mode of living, their dress, or their furniture; all these points are not touched upon. It is only concerned with the creations

and expressions of the artistic feeling among these primitive peoples.

The study of prehistoric relics was early awakened in the north, where this ancient culture continued much longer, and its remains are more obvious. Scandinavia took the initiative in this science. In 1832 Christian Jürgen Thomsen of Copenhagen determined three distinct periods of prehistory: the Stone Age, the Bronze Age, and the Iron Age, giving to each period the name of the material most in use, and at the same time indicating a gradual development. For a long time doubts were expressed as to these distinctions, but they have been fully justified, and are accepted to-day. With this, the outline of a scheme is given for the study of artistic productions, but the different periods are by no means restricted to the chief material in use. At first the Stone Age, afterwards known as the Late Stone Age, attracted most attention. Its character is best exhibited in those buildings of huge stone blocks, chiefly found in Scandinavia and Western France. These "megalithic" monuments were either for religious purposes—as the upright colossal blocks (Menhir) or the circles made of such blocks (Cromlech)—or they form tombs, as the simple stone chambers (Dolmen) or stone passages covered with huge blocks of stone; next, the barrows or graves covered with mounds of earth; finally, the great subterranean "giants' chambers."

All these structures, although the origin of each involves a great length of time, impress only by the colossal size of the materials; any form of art, even any dressing of the rough surface is unknown.

On utensils, however, both of earth and metal, especially the latter, appear ornamentations, which, it would seem, although the theory has been challenged, derive their origin from the primitive arts of plaiting

and weaving. The designs are, therefore, linear or Geometric.

About the middle of the century investigations advanced in both directions: backwards to the beginning of civilization, and forwards to the Iron Age.

To the Late Stone Age the Earlier was prefixed (the designations Paleolithic and Neolithic originated with Sir John Lubbock, now Lord Avebury). France has been the chief place of research, as it was not ice-covered during the glacial period, but always remained habitable for human beings. Jacques Boucher de Perthes of Abbeville began a series of investigations upon stone implements and other vestiges of human culture in the river-beds of Northern France, in his "*Antiquités celtiques et antédiluviennes*" in 1846–65, and in his writings "*De l'homme antédiluvien et de ses œuvres*" in 1860. Other investigators, as E. Lartet and Gabriel de Mortillet, followed his footsteps. A new direction was given to these investigations in 1853 by the important discoveries of caves in South-western France. Caves, the dwelling-places of prehistoric man, had frequently attracted attention, at first at Gailertsreuth in Franconia in 1774; later in Great Britain; gradually at a number of places in Central and Southern Europe. The best results were attained in the departments of Dordogne and Charente, and from there southward to the Pyrenees. In these caves bones were found of cave bears, of mammoths, and of reindeer, all remains of the glacial period, extending back many thousands of years, but representing different periods. The periods were soon distinguished by the names of the places where the most important finds had been made, as of Chelles, Solutré, and Madelaine. Human habitation in these caves was not only indicated by the rude stone utensils (pottery did not yet exist), but above all by the remarkable drawings on the bones of the mammoth

and reindeer. The first bone with incised drawing had been found thirty or forty years previously at Chaffaud (Vienne), and although exhibited from 1851 in the Musée de Cluny in Paris, its significance was only recognized in 1869 by the Danish antiquary, J. J. A. Worsaae. At that time E. Lartet, Henry Christie, and E. Piette had discovered a great quantity of material in the caves of Périgord (Grotto d'Aurignac, Madelaine, Laugerie Basse, Eyzies). These drawings are of very different artistic merit, some exhibiting a close observation and an accuracy in execution which are equally amazing. Some found in the seventies in the Canton of Schaffhausen (Kesslerloch near Thaingen), and during the nineties at Schweizerbild near Schaffhausen, aroused the greatest interest, as, for example, the masterly representation of a reindeer browsing. The perfection of the drawing seemed so inconceivable, for that primitive age, that doubts as to its genuineness were expressed and were unhappily strengthened by the appearance of forgeries. Suspicion, however, was soon silenced. Recent discoveries in France have almost surpassed these drawings on bones, in the paintings of animals which have been discovered on some of the cave walls at Fond de Gaume (Dordogne). The study of the artistic sense and achievements of savage races has proved the universal validity of a fact which seemed incredible so long as it was known only in isolated instances. A very primitive stage of art does not exclude an artistic eye and a correct reproduction; a valuable observation in regard to the origins of art.

The Earlier Stone Age (paleolithic) was separated by thousands of years of the glacial period from the Later Stone Age (neolithic). To the colossal stone monuments of the latter wooden structures were added. A year after the discoveries of some of the greater caves in 1854 the first pile dwellings were discovered in Switzerland.

These villages had been built on piles out into the lakes. The houses were chiefly of wood, and their refuse heaps indicate the mode of life of the inhabitants. The remains of these pile villages increased rapidly in number, and were soon discovered outside of Switzerland. They were eagerly studied in the valley of the Po, where the villages in the lakes (*palafitte*) and in the plain (*terremare*) anticipate the later Italic cities with their rectangular plan. The custom of building on piles extends from the Late Stone Age to far more advanced periods. Remains of weaving and pottery discovered in these dwellings show the Geometric style of ornamentation, which was characteristic of the period of transition to the Bronze Age. Innumerable bronze utensils have been found throughout a vast area which again can be subdivided into earlier and later. The Bronze Age of Southern Europe may, on the whole, be assigned to the second millennium before Christ; all the Mycenæan or Ægean artistic productions soon to be reviewed belong to this period.

Shortly before the discoveries of the caves and pile dwellings, some finds had been made which threw light upon the Iron Age, the last period of prehistoric times. The name Iron Age merely refers to the use of iron—which had formerly been rarely employed—beside bronze for all kinds of implements. In the development of the arts during ancient times, iron never played an important part; on the contrary, bronze always remained the chief material of artistic work.

Above the picturesque little town of Hallstatt in the Salzkammergut, wedged in between mountain cliffs and lake, there was explored, in 1846, and in the two decades following, an old burial-ground, which yielded great treasures. The entire art and civilization which here came to light for the first time received the name of Hallstatt, from the place of their discovery. Artistically

considered, the forms and incised ornamentations of the metalwork represent a peculiar late expression of the Geometric style. Examples of the Hallstatt civilization were soon found all over the Alpine region and beyond; toward the west as far as Burgundy, and toward the east as far as Hungary and Bosnia (the graves of Glavinaé). This Central European civilization, the ethnological origin of which has not yet been definitely fixed (the Illyrians have been suggested), was presently found in a particularly rich form and in various stages of development south of the Alps, in the plain of the Po. In 1853 Count Gozzadini discovered a burial site with rich finds of an early type at Villanova, near Bologna; in 1865 followed the discovery at Marzabotto, situated where the Reno leaves the Apennines; and in 1871 the older cemetery near the Certosa at Bologna was found, both representing a later period, in which figures were more richly developed. Both stages of this development were represented at Este.

The civilization of Hallstatt may, on the whole, be assigned to the first half of the last millennium before Christ, and is thus contemporary with the earlier centuries of the development of Greek art.

Later developments of the Iron Age have recently come to light. During the excavations carried on by Napoleon III in 1862 at Alesia (Alise Sainte-Reine) to recover Cæsarian relics, unusual objects of art were discovered, to which others from the Champagne were added. These discoveries of 1876 deserved special study, and were soon followed by those of La-Tène, on the Lake of Neufchâtel, exhibiting a similar form of art. It was observed, however, that these were decidedly different from and of later origin than the art of Hallstatt. A. W. Franks gave in 1869 to this new form of art the name of *Late Celtic*, but more widespread is the name of *La-Tène* art, suggested by Hans Hildebrand, and pro-

posed by him at the Prehistoric Congress at Stockholm in 1874, in contrast to the older art of Hallstatt. La-Tène art, the national art of the Celts, is more restricted in extent and scope, and corresponding to the warlike character of the Celts, it appears chiefly on weapons. This form of art was superseded by the Roman in the last century B.C.; its beginning may be traced to the middle of the last millennium.

The further back we go, the more uncertain are chronological data, and yet many scholars believe that the different stages of development can be definitely assigned to certain centuries, even in those times when we are left without records. One of the most distinguished investigators, Oskar Montelius, represents these views. And again scholars are not all in accord, whether the north developed under the influence of the south, or whether the north contributed its share; whether there were influences from the Orient, or again, whether the north and south did not develop simultaneously. It is evident that the chronology of the several stages of development is very different in various districts. In the north, for example, the Geometric style prevailed until the introduction of Christianity, while in Southern Europe it disappears in the first centuries of the last millennium, and its prime is to be sought in the second millennium. We have seen that the Geometric style appeared in Greece about this time. Had this actually come late from the north with the "Dorian Invasion"? We shall presently see that there existed in the second millennium an entirely different art in Greek countries, an art for the aristocracy of the Greek Heroic Age. But would this special style in Greece exclude an art existing at the same time all over Europe? The supposition recently expressed deserves special consideration, that the plebeian Geometric style existed side by side with the Mycenæan art of princes, and that only after

the collapse of the Heroic Age did the former attain supremacy. Certain data seem to support these observations. If we are not mistaken, this conception will be justified in the future.

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While our outlook was thus extended back into the immeasurable past, and the artistic tradition of Greece seemed to be linked with that of the rest of Europe by channels till then unsuspected, facts of a new order came to light on Greek soil. We refer to Heinrich Schliemann, whose name represents an entire epoch.

Discussions concerning Schliemann have not yet quite ceased. Although the voices of those who were totally opposed to him have been silenced, yet at times the pæans are still heard of those who, knowing little of archæological science, look upon Schliemann as an ideal investigator. It is, however, possible to judge him impartially to-day; his merits and his deficiencies, as far as they affected science, can be balanced, and an opinion can be expressed which will have the support of all those who are capable of a scientific decision on archæological questions.

As a boy, Heinrich Schliemann became inspired by Homer, and in his eighth year he decided to excavate Troy. In 1836, at the age of fourteen, he was apprentice to a small shopkeeper; at the age of twenty-seven he had become a wholesale merchant in St. Petersburg, without ever losing sight of his ideals. He had passed the middle of the forties, when in 1868 he ventured on his first journey to the Homeric sites. The aim of his life was now before him: to rediscover the Homeric world, every detail of which he held for gospel truth. Then began a series of enterprises, the successes of which were announced with an amount of advertising that frequently made the world rather distrustful. Work was begun at Troy in 1871, Mycenæ followed in 1874,

Troy was again explored in 1878, Orchomenos in 1880, and Tiryns in 1884, and Troy once more in 1890.

If it was ever demonstrated that "Faith alone makes blessed," it certainly was in this case. It endowed Schliemann with a divining-rod to bring the treasures forth from the earth, and led him to the places where to dig. At that time every one believed that Homeric Troy had stood on the heights of Bunarbashi, where the Scamander enters the plain, and the new Ilion of Hellenistic times on the hill of Hissarlik. Schliemann began to dig at Hissarlik, at the suggestion of Frank Calvert, and found Ancient Troy.

At Mycenæ hardly any one would have thought of digging immediately behind the Lion Gate, but the misunderstanding of a word in Pausanias induced Schliemann to look for the graves of the Atridæ there, and he found, if not these, far older and more surprising burial sites. At Tiryns, the soil upon the rocks appeared to be so light that excavations hardly promised anything. Schliemann began, and uncovered a model Homeric citadel. Besides the firm belief in Homer, in the accuracy of whose descriptions he had implicit confidence, he preserved the ideals of his youth, coupled with great generosity, which led him to spend yearly £5000 on his excavations. Finally he possessed indefatigable energy and tenacity of purpose. Such were the qualities which brought him fame and repeated success.

And the result was nothing less than the recovery of a lost world, underlying what till then was known, one may say the world of Homer—although not in so literal and narrow a sense as Schliemann understood it. For this undeniable and inestimable gain science must always remain most grateful, and the Homeric world will ever be associated with his name and that of the noble Greek woman his wife, whoo shared all his labours and cares, as well as his success and his fame.

LION GATE, MYCENÆ

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But there is a reverse to the medal. Schliemann's education and talents were quite foreign to all scientific thinking and method. He cared neither for history nor art, as his indifference to the Hermes of Praxiteles proved; primitive culture, curiosities, and vague imaginings exhausted his interests. He was a dilettante in both senses of the word: in the good sense of an enthusiastic lover of art who makes sacrifices for it, and in the other sense of a man who pursues his aim without method or thorough knowledge. He was a dilettante in things architectural and archæological; he was a dilettante in excavating, for he had no idea that it is based upon method and technique. It appeared self-evident to him that all traces of Homeric antiquity had to be sought at a great depth. Thus he recognized in Hissarlik the site of Ancient Troy, but pushed his shafts so deep into the hillside as almost to disregard the true Homeric citadel.

He only called a halt at the second lowest stratum, "the burnt city," in which he believed that he recognized the Troy destroyed by the Greeks, though it actually was a much older and more primitive settlement.

At Mycenæ some of the grave reliefs still remained upright, but Schliemann to reach the shaft graves below had these removed with great difficulty, without noting their position or their relation to the different graves.

At Tiryns, Schliemann was on the point of destroying the walls of the palace, as he thought he recognized therein mortar, the common characteristic of Roman or medieval buildings. Dörpfeld fortunately arrived in time to save the valuable remains, and in the supposed mortar he recognized the remains of marble slabs decomposed by fire.

His reports abounded in peculiarities, as, for example, his predilection for cow- or owl-headed goddesses which he recognized in many "face-urns," etc. How-

ever much this impressed the general public of amateurs, it could safely be disregarded. His reports were equally well filled with actual facts; e.g. as to the depth at which each sherd was found. But as, according to an eye-witness, these data were only recorded every evening after the day's work, one can see how uncertain they must be, for all their apparent exactitude. The reports, as well as the excavations, only became trustworthy where competent specialists assisted at the work or reported on it.

Among these Dörpfeld deserves the foremost place. He not only saved the remains of Tiryns, but he put them in order, as it were, so as to make them comprehensible in every respect. Dörpfeld first made the architecture of Troy clear, and after Schliemann's death he uncovered in the Sixth City the Homeric Troy, as far as the Hellenistic city had not destroyed it. Dörpfeld unfortunately did not take part in the Mycenæan excavations, and the reports of the Greek overseer have until recently been withheld; some compensation has been offered by recent excavations undertaken by the first-rate authority Chrestós Tsóuntas.

The results of Schliemann's excavations have become so well known through popular publications that a few remarks will suffice here.

The fortress-hill of Troy, with an elevation of only twenty metres, shows a series of strata (Schliemann counted seven, recently nine have been distinguished), in which a development of the settlements can be followed from primeval to Roman times. Schliemann's objective, as has been stated, was the second lowest stratum, in which he believed he had found Homeric Troy. The castle wall appeared, with the Scæan Gate; the Palace of Priam, with a court, a porch, and the main apartment exhibiting the archetype of the later Greek house. The "golden treasure of Priam" has the simplest designs.

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TIRYNS

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Finally a mass of pottery and sherds was found, showing uniformly the most primitive character. The civilization uncovered here did not correspond with the descriptions in the Homeric poems. The entire find dates much further back than to the one we have since learnt to know as Homeric, and it presumably belongs to the third millennium. After Mycenæ and Tiryns had been excavated, Schliemann returned again to Troy with Dörpfeld in 1890, in which year Schliemann died, and in 1893–4 Dörpfeld worked here alone, and only then uncovered in the second uppermost city Homeric Troy, or at least the city whose entire character corresponds to the two citadels mentioned above. In the meantime we had become accustomed to apply the term Mycenæan to its character. Unfortunately the central part of the settlement had already been destroyed in ancient times, to make room for the new city of Ilion. Schliemann had found a beautiful metope with Helios driving his car heavenwards, belonging to the Temple of Athene in that city. Of Mycenæan Troy only the massive walls remained, and some apartments (megara), one of which showed two naves. We need not necessarily suppose this to have been a temple; enclosed temples only became general in the Greek world in the last millennium B.C.

At Tiryns the plan was much simpler; here is a citadel, which, according to its form and situation, might be termed a diminutive Orvieto. It is a low isolated rock, about the shape of the sole of a shoe, surrounded by cyclopean walls. In the Homeric poems this city is called "well-walled" Tiryns, this epithet testifying to the impression the massive walls produce. The area may be divided into the southern, more elevated half with the citadel, and a northern half recently again excavated, without yielding important results. The former gives us a distinct and clear picture of an Homeric palace, protected by walls, the gate surmounted by a

tower; a main entrance with several gates which could be well defended; at the side a staircase and another entrance; a court with entrance gates and porches; besides a series of magazines like casemates in the thickness of the walls for the storing of provisions; two megara, one for men and one for women, separated, as in the palaces of Assyria, by numerous courts and passages. From the men's wing a special entrance leads to the paved court, surrounded by columns and containing an altar. A short passage leads to the luxurious bathroom; its floor consisted of one huge stone of twelve square metres, and the earthenware bath had painted decorations. On entering the main court one faces the pillared vestibule leading into the men's chief apartment, the Megaron; in the centre of the latter is the round hearth, about which were placed four wooden columns supporting the roof. An open structure above the fireplace allowed the smoke to escape. The marble frieze of the main hall, the bases for wooden columns, tapering towards the bottom and with heavy capitals, the remains of wall paintings with conventional forms and occasional figures, complete the picture. The imagination readily fills the halls with Homeric scenes. Telemachos enters the gate—"the men are led into the hall divine," "they went to the polished baths and bathed them," "white-armed Arete is seated near the hearth," "in the hall where the sweet singer Demodokos showed forth his minstrelsy," or again "Athene still for a while made trial of the might and prowess of Odysseus and his renowned son." It is true these are ideal creations, which one delights to place in their proper environment, while more prosaic beings assume every legend in the poems to have been actual history.

The women's apartment at Tiryns is still on the ground-floor, and not as in the palace of Odysseus in an upper storey; this merely indicates simpler conditions than

TROY

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were assumed by the poet of the Odyssey. Tiryns itself shows traces of later reconstruction.

If the palace at Tiryns, with its delightful and extensive view towards the sea, suggests only cheerful thoughts, the situation, remains and legends of Mycenæ suggest serious and sombre ones. The complete clearing of the Treasury of Atreus and the neighbouring sepulchral monuments has revealed more clearly the majestic character of these superb royal tombs, which can be compared with the Roman Pantheon for impressiveness. The dignified façade was decorated in colours, and the interior of the beehive tomb had metal ornaments. The ceiling of the inner chamber was missing, but its character can be inferred from the Minyas Tomb at Orchomenos, an Egyptian design of rosettes and palmettes evidently taken from a woven carpet pattern. The Lion Gate gained greatly in impressiveness by being quite uncovered down to the threshold.

Although the citadel at Mycenæ with a similar ground plan has suffered greater destruction than Tiryns, yet the burial site—surrounded by upright standing slabs—behind the Lion Gate proved a great surprise. Schliemann discovered in this circle five shaft graves (a sixth was later discovered), in two of which, in particular, the dead were completely covered with gold; and so numerous were the gold vessels found in them as to justify the Homeric fame of Mycenæ "rich in gold." A mass of gold disks was found with most exquisite designs of cuttlefish, butterflies spirals, and palm leaves, each artistically filling the space; a little gold sanctuary of Aphrodite, resembling a high altar with two doves, gold cups graphically recalling Homer's description; golden masks which, according to a widespread custom, covered the faces of the dead; and a silver cow's head with horns covered with gold leaf. A curious fragment of a silver vase, representing a battle scene on the castle

walls, recalls a famous scene on the shield of Achilles. But the most perfect specimen of workmanship was only discovered later in 1880, when Athanasios Kumanúdes, with great care and skill, cleaned certain daggers in the Athens Museum of rust, and discovered underneath the most delicate work in gold, silver, and electron, representing a lion hunt, or cats hunting wild-fowl among reeds, while fishes are visible in a river. Another dagger is adorned with lilies.

Many of these gold ornaments show peculiar designs, which can be recognized more clearly still on innumerable potsherds found on this ancient cult site. They differ from all known earlier styles, particularly from the Geometric, with which they have only the spiral and boss motives in common. Otherwise this art is suggested chiefly by the life of the sea. Seaweeds seem almost in motion by the action of the water; cuttlefish with extended tentacles, shellfishes and other animals of the Mediterranean are represented. Fantastic aquatic beings are not absent; only rarely does this art venture on other forms, as when it represents lean warriors with sharp features, wearing plumed helmets, and carrying great 8-shaped shields of ox-hide. On the whole, we gain the impression of an art fresh in perception and in reproduction; the plants are conventionalized, but very different from the stiff forms of the orientalized style.

In these productions it is not difficult to distinguish earlier and later, or again simpler and more ornate designs. This shows that the period lasted a long time, and yet one must deny it any capacity for development. Evidently certain conservative influences have to be taken into consideration to explain its long duration.

Hardly had Mycenæan antiquity been revealed in the Argolid when there appeared numerous evidences of it in different parts of Greece, as had been the case when the Geometric style was discovered. It seemed as if

the earth had only been waiting to disclose her treasures. Attica came first; south of Pentelikos, at Spata, the ancient Deme of Erchia, Mycenæan tombs were opened in 1877, while near Athens the dome-shaped tomb at Menidi, in the village of Acharnai, made famous by the charcoal-burners in Aristophanes, disclosed in 1880 similar rich treasures. Mycenæan remains were discovered all along the east coast of Greece from Thessaly to Laconia.

In Bœotia, upon an island in Lake Kopaïs, a Mycenæan stronghold was unexpectedly revealed, which may be the ancient Arne. Chrestos Tsountas, who had distinguished himself at Mycenæ, made one of the most remarkable finds in 1888. In Laconia, south of Sparta near Vaphio, on the site of the Achæan Pharis, he opened a Tholos tomb, in which he discovered two gold cups with reliefs in a vigorous style of workmanship. On one are represented bulls peacefully grazing in a wood, while on the other they are being caught in nets by men (again two pendants as in the Homeric description of the shield); both evince the realistic observation and the technical skill of the Mycenæan Age at a rare level of truly artistic power.

But traces of this art were not confined to the coasts of Greece; Mycenæan vases and potsherds were soon found on all the islands of the Ægean as far as Cyprus. Adolf Furtwängler and Georg Löschcke set a good example by issuing at once a complete publication of these. Since then the geographical area in which this art is known to occur has been greatly extended, for it has been found on the coast of Italy and as far as Spain. It is evident that we are dealing with a civilization of long duration and of great extent.

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The student soon realized that this culture was richer

and more ancient than that called forth by the so-called Dorian Invasion, which required several centuries before it produced the beginnings of the true Hellenic art, and that this newly discovered art in its technical perfection, its definite and at times excellent designs, anticipated actual Hellenic art. This art then had to be placed before the beginning of Greek history in the second millennium. Was it the long-sought Homeric art ?

We must distinguish, as Wolfgang Reichel did in 1894, between the time of the Ionian singers, to whom we owe the Homeric poems as they have come down to us, and the time in which the action of the poems took place. The singers found numerous old sagas which had actually originated in those heroic times described, and may even, in some cases, have already received definite shape, but the singer bestowed upon them the poetic form of his time and of his tribe, adding numerous features derived from his own surroundings. It becomes necessary to differentiate between the old—in Homeric language, Achæan—Heroic sagas of the second millennium and the Ionian additions to them. We are aided in this frequently by the contents, the character of the motives, the tone of the representation, the more formal or the freer description, but our most certain guide is often to be found in works of art. To give the most striking example : neither Mycenæan art nor the older portions of the Iliad know the round Ionian metal shield, but only the great 8-shaped or small crescent-shaped shield of ox-hide ; wherever we meet the former we may know we are dealing with Ionian additions. Therefore Mycenæan art was not the art familiar to the Homeric Ionian singers, but the art of older ruling families, in whose honour all these sagas had been composed, and from which the Ionian poet borrowed the colour and circumstances of the Heroic Age. We may, therefore, term it the art of the Homeric Heroic Age.

Both in Homeric poetry and in Mycenæan art gold plays an important part, and yet is rarely found on Greek soil. Ivory, which must certainly have come from foreign countries, was known to Homer, and has been discovered at Spata. Lions were as little known to Greece as cats or the papyrus, and yet Homer knows them, and they were known in art, and cats and papyrus as well, if indeed these are the objects represented on the dagger-blade. Art then was strongly permeated with foreign elements; were these wares imported? This idea arose while this newly discovered early age and the extent and perfection of its art were little known. But all doubts disappeared when the universality of the decoration and style on different materials was remarked; e.g. the very peculiar formation and dress of the slim men are the same on wall paintings, gold cups, pottery, and gems. And this unity of style becomes the more convincing in view of the wide dispersion of the sites; the potsherds in particular testify to the ubiquity of one type of art. It must have been an indigenous art, an art familiar to the old sagas; all agree on that point.

The foreign elements in Mycenæan art demanded another explanation: intercourse with foreign countries must have existed. It was Newton who first discovered in Mycenæan strata, in the island of Rhodes, Egyptian scarabs dating from the fifteenth century. From recently discovered records, Egyptology has established that extensive intercourse, chiefly of a warlike nature, had existed between Egypt and the "Islands of the sea," but this would not in any way exclude the influence of trade or art. If, on the one hand, Egyptian traces appeared in Mycenæan art, as the cat and the papyrus, there appeared in the first half of the fourteenth century under Amenhotep III and IV distinct traces of Mycenæan influence. The favourite palace of the latter king, Tell-el-Amarna, differs greatly from the usual Egyptian

type (Chap. X); a floor in the palace has a representation of animals in a thicket of reeds, vying in delicacy and animation with the famous dagger. Mycenæan potsherds have frequently been found in Egypt. Thus some intercourse in trade and an exchange of objects of art between Egypt and the Greek peoples of the Archipelago are established for that period. But it hardly appears as if Egypt had been the one to bestow her culture, for in comparing an Egyptian dagger of *c.* 1500 with the Mycenæan one of the same date, the superiority of the latter is very evident. The art of Egypt was at that time already growing old and stiff. It was the Mycenæan influence with its youthful vigour that infused a little fresh life into it. The art of Mycenæ, on the other hand, possessing greater vitality, borrowed at most some externals from Egypt. After the short episode of Amenhotep IV, 1375–58, the reaction which followed seems to have broken off foreign intercourse more and more. It can only rarely be traced in Egypt beyond the thirteenth century; whether the internal conditions of Egypt brought this about, or international complications, or the collapse of Mycenæan civilization, cannot be determined. This connection with Egypt only strengthens the impression made by the remains of Mycenæan culture. The civilization found in the islands and along the coasts of the Ægean suggests the idea of a powerful and brilliant development of an independent and vigorous genius. We may take it for granted that this precious art of the Achæan ruling families which, with the exception perhaps of the pottery, was not shared by their dependents, lasted as long as the rule of the heroes themselves, that is, until the slow racial migrations known as the "Dorian Invasion." When this inundated Greece, and brought in, with the germs of progress, for a time more barbarous conditions, it extinguished the last remnants of this highly developed

culture, which henceforth only lived in the Heroic legends. In the practice of art all this aristocratic splendour was superseded by the plebeian art of the Geometric style, whether this was introduced by the emigrants, or whether, as has been hinted above (p. 214), and, as we believe, it was the old art of Central Europe, which had existed side by side with the princely Mycenæan art, and only now gained supremacy.

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As soon as we had come to know Mycenæan civilization the question arose where had it originated and by what races had it been cultivated? It has always retained the name of Mycenæan from the first site where it was discovered, and the fame of Mycenæ in the Homeric poems may have increased the tendency to look upon these fortress-palaces in the Argolid as the starting-point of this civilization and art. And although these citadels occupy a prominent place in the Heroic saga, in reality they were too unimportant in the history of civilization to justify the name of a Mycenæan culture. These petty princes of the Argolid were only members of that Achæan Heroic world whose fame filled the prehistoric age. Does this indicate the correct name?

The Achæans were not only settled in the Argolid, but in many other places on the Greek mainland, and even beyond, as far as Crete. They were even known in foreign parts, if the *Aquaiusha* mentioned in Egyptian records under Meneptah, 1225–15, the Pharaoh of the Exodus of the Children of Israel, are correctly identified with the Achæans, which is not by any means certain. The name Achæan would thus appear more acceptable, in any case, than Mycenæan, but it will hardly be advisable to adopt it, as it is not descriptive as regards one main point.

It was F. Dümmler who first referred to the vast ex-

tent of this culture through the whole Archipelago. It has been seen that the favourite motives were derived from the sea. The sea is, as it were, the chief element in the art, and the great extent of this art in all the islands and along the coast of the Ægean presupposes a great sea power, a Thalassocracy. It was therefore not strange that U. Köhler should think of the Carians, a non-Hellenic race to whom ancient historians attribute the mastery of the sea at a very early period. They are said to have been followed by the Cretans, whose most powerful ruler was Minos.

At the beginning of these investigations in 1883 A. Milchhöfer had designated Crete as the main seat of this newly discovered culture. The so-called "Island stones," or pebbles cut with designs, which had recently been found in various islands, and in Crete in particular, led him to this conjecture. Their style was Mycenæan; their frequently fantastic designs Milchhöfer successfully proved to be free from Asiatic influence, and he connected them with other monuments of Mycenæan art.

Crete had been the destination of numerous travellers, and the remains of its cities had been frequently investigated, but prehistoric Crete still remained completely unknown. For it was of no importance that a Cretan, Minos Kalokairinòs, had in 1878 uncovered some walls of the Minoan capital Knossos, which W. J. Stillman had in 1881 declared to be the Labyrinth of Minos, the scene of Theseus' struggle with the legendary Minotaur. Of far greater importance were the peculiar pictographs noticed by Stillman. A year after the appearance of Milchhöfer's book in 1884, attention was again drawn to Crete by excavations carried on by the Italians on the south coast, together with a Cretan, Georgios Pasparakes, the directors being Federico Halbherr and Paolo Orsi.

In ancient Gortyna, the chief place in Southern Crete,

the famous old municipal laws were discovered and soon copied by Halbherr and Ernst Fabricius. But of greater significance for archæology was the discovery of the Grotto of Zeus on Mount Ida by Pasparákes in 1884, and published by the two Italians mentioned. Besides very primitive bronze figures, bronze shields were found with chased decoration, exhibiting Oriental motives, which at first were thought to be Phœnician, until H. Brunn, in 1893, declared these products to be indigenous, although influenced by the East. Incited by Milchhöfer and the success of the two Italians, Schliemann made, in 1886, an attempt to secure Knossos for excavations, the direction of which would have been in the hands of Dörpfeld. But the plan failed owing to the excessive demands of the Cretans; partly owing to political complications, and partly to the needless quarrel in which Schliemann became involved with T. E. Bötticher (Bötticher could only see in Troy a great crematorium). For some time Crete remained in the background. The work was resumed again in the nineties, in the north and in the south simultaneously. In the north Arthur Evans, the son of Sir John Evans, the eminent antiquary and savant, chose Knossos as his object. Although he had to contend with similar demands of the Cretans, he succeeded by patient endurance where Schliemann failed, and finally bought a great area, where he has been engaged since 1900 in uncovering what may be termed the Palace of Minos. It is a more complex and extensive series of courts, rooms, and labyrinthine passages than has been met with anywhere on Greek soil. A survey of the whole is difficult, as it is not a homogeneous structure, but numerous very different palaces, separated by centuries from one another, and built one above the other in strata. For one at a distance it still remains difficult to disentangle this maze, but one must be impressed with the mighty royal residence of the ancient

Cretan rulers. The great Palace of Knossos, situated in the open country and undefended by walls, compares with the small walled fortress-palaces of Tiryns and Mycenæ as the palace of Versailles compares with the Wartburg. The power of a Minos, who ruled the sea, may have borne a similar relation to that of a Proitos or an Atreus, only no poet recorded his fame in so brilliant and lasting a form as was accorded to the Achæan princes. Even the tablets with ancient Cretan pictographs which Evans found will hardly, even if they yield information in regard to language and nationality, render this service. Broad stairs lead from the court through anterooms into spacious apartments, often divided by columns longitudinally or transversely. Wooden columns, tapering towards the base, were a main feature in Cretan architecture. We first encounter this column in the Mycenæan Lion Gate, and it is distinctly seen, with the wooden beams belonging to it, in a wall painting at Knossos, which represents a structure resembling an altar. One of the smaller rooms of the palace provided with an anteroom has stone seats around the wall, and in the centre a marble throne with a high back. Opposite columns extend to a staircase which descends to a bathroom lighted from above. Light-wells were very usual in these palaces of several storeys; one may be seen, for instance, on a staircase, the steps of which are in good condition to-day. At one of the main entrances the visitor was received by a row of life-size cup-bearers of both sexes painted upon the walls. On another wall we see painted in a clear, graphic miniature style men and women thickly crowded together as if eagerly witnessing a performance, the latter in the usual costume with a full, elaborately flounced skirt and a very low-cut bodice. Most perfect examples of stucco reliefs have been found. Neither bathrooms nor latrines are wanting in the palace. The great wealth of the ruler

THRONE ROOM, KNOSSOS

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MAGAZINES AND PITHOI, KNOSSOS

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can be more fully realized when we see the underground magazines within which huge earthen *pithoi* were ranged side by side, filled with grain or provisions, while in the floor were ingenious openings for the safe-keeping of treasures.

The palaces uncovered on the south coast at and near the beautifully situated Phaistos, by the Italians Federico Halbherr, Luigi Pernier, and Luigi Savignoni, present the same pictures on a smaller scale, and therefore more simply and clearly. All the main features of the palace at Knossos are found here in the chief palace on a more modest scale; the small palace at Hagia Triada at first suggested a summer villa. Painting and sculpture played an important part here. The fragment of a wall painting shows with masterly skill a wild cat pursuing a pheasant in a thicket, and again a fragment of a steatite vase exhibits in low relief a procession of men in excellent drawing. Every new find deepens our sense of a great civilization and of an art which, by virtue of its frank naturalism, united to a well-trained artistic eye and a technical skill by no means contemptible, succeeded in representing men in as individual and characteristic a manner as Hellenic art only attained nearly one thousand years later, at the beginning of the fifth century. Such remains as could be removed are preserved in the Museum at Herákleia (Candia). What a brilliant light do these discoveries throw upon the Greek Heroic Age of the second millennium, which now rises out of the mists of legendary tradition! These discoveries breathe also new life into the portrayal of the Homeric epos, and help us in distinguishing the older and more vigorous parts from the delicate and more winning, but at the same time partly modern, partly conventional additions of the Ionian singers.

The Cretans certainly had intercourse with Egypt. At least, the Keftiu represented on Egyptian wall

paintings holding Mycenæan gold vessels are identified, in all probability, with the Cretans, the Caphtor of the Bible.

But investigations have only just been inaugurated which aim at establishing the relation of early Cretan civilization in its various revolutions (for that such took place has been proved) with the civilization of the mainland, and which may some day show to what extent Cretan and Achæan influences may have been reciprocally exerted.

Certain characteristics are peculiar to Cretan art, others to that of the mainland, but in spite of this a homogeneous art and culture cannot be doubted. The great island of Crete, the seat of the Thalassocracy, was apparently the chief centre of this old civilization. Shall we therefore call it "Cretan" or "Minoan"? We should only be justified in this, if we were certain that it had originated only in Crete, and spread thence northwards. On the other hand, "Achæan" can hardly be used, on account of the preponderance of Crete, which in its entirety can by no means be termed Achæan. Let us rather use the terms Cretan, Mycenæan, and Achæan to designate special local groups, while to the civilization as a whole we may, without prejudicing the issue, apply a name derived from the area over which it is mainly distributed, the coasts and islands of the Ægean, and call it simply "Ægean."

IX

SINGLE DISCOVERIES ON CLASSIC SOIL

THE new movement which in the "Archæology of the Spade" has been inaugurated since 1870 we have now pursued in three directions. The chief sites of Greek civilization have led us not only into classic but also into late Greek times; the plans of cities belong mainly to Hellenistic and Roman times. Schliemann and his successors have led us backwards, a full millennium and more, and disclosed pre-Hellenic culture and art. Besides these great results in research a series of single finds has occurred—partly by accident, partly in consequence of a preconceived scientific plan. It will not be possible to pursue here all in detail, we will only mention those on classic soil, which have yielded the greatest results for archæology, or have offered the most important new problems.

The science of vases has been extended back in an unexpected manner by the discovery of the Geometric, and later of the Mycenæan style. Pottery, which is almost indestructible, and is found everywhere, affords one of the most certain indications of human civilization. The different classes of pottery, and their development in form and decoration, furnish us with the most valuable assistance in recognizing more distant periods of civilization and their affinities. Its significance and ethnology in the history of civilization far exceeds its value in the history of art. This only comes again into the

foreground when to the simple decorative scheme is added the pictorial element, constantly growing more independent. In the Ægean period it only appears in isolated cases; it occurs more frequently in the later phase of the Geometric style, the so-called Dipylon (p. 207). For the succeeding periods of painted vases of the historical times, the old views still obtained in 1870, which Otto Jahn had developed in 1854.

Only in one point had we advanced, with the help of palæography, and not through the study of style.

Adolph Kirchhoff's epoch-making "*Studien zur Geschichte des griechischen Alphabetes*" appeared in 1863. Among the many important new results of this masterly investigation was a special class distinguished by Kirchhoff amid the great number of "Corinthian" vases by virtue of the alphabet; this alphabet is referred to Chalkis and its colonies. For the first time an Ionian city was ranked among the places of manufacture of painted vases. The stylistic test justified the inference, and subsequently many may have asked themselves why this active and artistically endowed Ionian race should have contributed nothing to this province of art? But the old point of view was deep-rooted, and the Italian horizon still so narrow that when soon after in the tombs at Cære (Cerveteri) a very peculiar class of archaic vases appeared, the Cæretan vases were looked upon as an Etruscan imitation of the Corinthian style. It required a long time to recognize here also an Ionian style, differing, it is true, greatly from that of Chalkis. Whoever has contemplated the Busiris Vase at Vienna, with the graphic representation of the yellow hook-nosed Egyptians in their linen garments and of the snub-nosed and woolly-haired Nubians, must be convinced that the painter gained his impressions in a country where a personal knowledge of Egypt was attainable. We conjecture to-day that Samos—which participated in colonizing

Naukratis—may have been the home of these vases, which are without inscriptions, and, until now, have only been found at Cære. A possibility, of course, remains that they may have been manufactured by Ionian settlers at Cære or at its seaport, Agylla.

Cyrene revealed in 1880 a class of vases partly known, with peculiar characteristics and a special alphabet; silphion, the chief product of the country, indicated the home of the vases. A vase in the Paris cabinet of coins represented King Arkesilas II as a silphion merchant, and exhibited certain characteristics which revealed familiarity with native customs. Finally, the Phineus bowl at Würzburg, which became known in 1874, and has since been greatly damaged, leads us to infer, from the character of its inscription, that the place of its manufacture must have been one of the Ionian islands or cities.

Ionian painting thus disclosed is fundamentally different from the Corinthian. Even when the drawing is found to be awkward and clumsy, it is never stiff nor lifeless. Ionian mobility and volubility are evident everywhere, frequently with drastic humour, so that it even influenced the more sober Corinthian art. We have learnt to distinguish the earlier pure Corinthian from the later style, subject to Ionian influences. The number of independent Ionian communities accounts for the great variety of Ionian vases, in spite of general characteristics in common. An eager search began in the eighties for other Ionian examples, even without the help of inscriptions; herein F. Dümmler distinguished himself by his great acumen. Two definite facts helped in this search.

In the old Ionian city of Clazomenæ, on the Gulf of Smyrna, until then hardly known to the archæological world, there were found in 1882 remains of painted terracotta sarcophagi; to which others were soon added. The great museums of Berlin, London, and Paris made

efforts to acquire examples of these clay sarcophagi, which until now have only been found at Clazomenæ. The paintings on these sarcophagi give us an excellent survey of a certain class of painting on clay of the sixth century, how it developed from simple silhouettes into the painting of light figures on a dark background, or again of mere outlines delicately traced (the Attic development is here clearly indicated); how the severe symmetrical style of ornamentation and traditional scenes of war and the chase were rendered. These are apparently reminiscences of the devastating invasions of the Cimmerians in Asia Minor, a clear parallel to the oldest Ionian painting known from literary tradition, the Battle of Magnesia, by Bularchos.

The second illuminating discovery was made in Egypt, when, in 1884–6, Flinders Petrie and Ernest A. Gardner excavated Naukratis, the great factory on the Nile, in which a number of cities in Asia Minor participated. Besides fragments of an early Ionic capital, a vast number of potsherds were found, wherein Georg Löschcke was able to distinguish three groups, which could be distributed among the three cities: Miletos, Samos, and Mytilene. This grouping was confirmed by the investigations carried on by J. Böhlau in 1894 in Ionian burial-grounds, particularly at Samos. The Egyptian Daphne (Tell Defenneh) offered another coloured style in 1888, and our increased knowledge of Ionian art even led us to attribute to the Ionians the vases found in the Dorian island of Rhodes, by Salzmann, at Kameiros in the sixties. These Rhodian vases, however, form a class by themselves, and their Ionian origin has been often disputed.

All these discoveries and researches threw unsuspected light on the artistic activity of Ionia in its golden age, the sixth century. An important and until then blank page in the history of art had been filled, and the influence

of Ionia was perceptible everywhere. As we shall presently see, early Ionian sculpture, of which fine examples had been found at Delos, was resuscitated on the Acropolis of Athens. In Attica the search for and the study of vases continued, the intermediate period was gradually being filled between the Dipylon and the old Attic style of the time of Solon; vases found in Bœotia helped to differentiate the peculiarities of different districts.

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Bœotia was also the scene of a discovery which at the time created immense interest. Tanagra, the little town in Southern Bœotia, need only be mentioned to fill our imagination with those delightful little figurines that bear its name. Since 1870, when secret excavations began there, great numbers have emerged from the graves of this town once famed for its ceramic industry. Unfortunately forgers soon began to carry on a great trade in copying these figurines.

The Tanagra terra-cottas are made of Bœotian clay, but with Attic spirit and Attic grace. Erotes, transformed here into pretty children, hover in swarms about girls and women, who are represented now grave, now playful, usually modestly draped, often wearing a round pointed hat or delicately tinted garments, at times seated upon rocks, or holding a fan, or with a dove upon the shoulder, or again, looking down upon a mask. They are Praxitelean forms taken from daily life, with touches of their surroundings, preserving all the modest dignity of good Attic times, as in the Grave Reliefs, and utterly different from their luxurious and coquettish Hellenistic sisters of Asia Minor.

And beside these refined girls appear graphic representations of daily life—the stern pedagogue, the skilful barber, the dawdling street-arab, groups recalling the simple realism of Egyptian sculpture of the Old Kingdom,

but entirely wanting in the piquant realism of the Alexandrian bronzes of Hellenistic times. The terra-cottas of Tanagra thus illustrate the after effects of a great art upon the handicraft of the following generation.

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The activity of the Archæological Society in Athens led to important results. By continuing to uncover the Theatre of Dionysos, which Strack had begun in 1862 (the Odeion of Herodes Atticus had been excavated in 1858), a stately row of seats of honour was revealed, upon which Athenian priests and high officials witnessed the performances as they sat about the priest of Dionysos in his arm-chair, the latter covered with beautiful reliefs.

A more thorough investigation of the stage-building was undertaken by Dörpfeld in 1886–95. The burial-ground before the Dipylon and the Sanctuary of Asklepios have been mentioned above (pp. 205, 135). Below the latter there was discovered in 1887–8 a long hall with two naves. It had been built for Athenian audiences by the Pergamene King Eumenes II, and resembled the Stoa of Attalos II, built near the Athenian market, and uncovered 1859–62. This had two naves, and was two storeys high, and provided with shops, and formed a model of Pergamene architecture, and had been known before excavations had begun at Pergamon itself or the Hall of Eumenes II had been found there. But all these minor excavations appeared insignificant compared with the work carried on on the Acropolis.

On all early pictures of the Acropolis there can be seen a high clumsy tower erected near the south wing of the Propylæa in the Middle Ages. In 1876 Schliemann provided the means for removing this tower. The immediate result was the elucidation of the plans of the Propylæa and of the Temple of Nike. These successes strengthened the desire, frequently expressed, to make

a more thorough investigation of the entire citadel. The Acropolis, as is well known, was completely devastated and destroyed by fire at the time of the Persian conquest in 480. On the top of this rubbish heap the Periclean Age erected its famous buildings: the Parthenon, the Propylæa, the Temple of Nike, and the Erechtheion, which constituted its glory, and important remains of which have come down to our times.

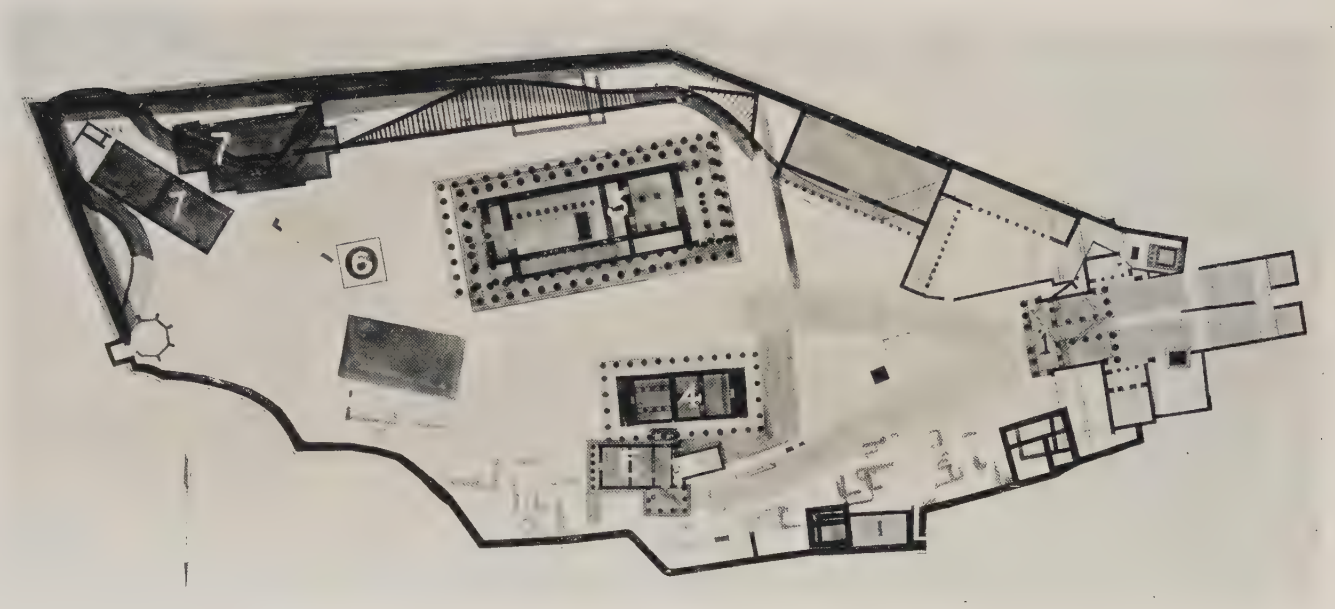
In this manner all older pre-Persian traces had been covered under the Periclean soil—which has come to be simply termed "*Perserschutt*"—rubbish of the Persians. Probably only one seated statue of Athene survived the stress of time; Pausanias saw this near the Erechtheion, near which it was in fact early discovered. Only rarely had any pre-Persian work come to light by reason of deeper excavations, as the relief of a youthful charioteer (the so-called "*Wagenbesteigende Frau*"), or the statue of a man carrying a calf on his shoulders. Excavations at the massive foundations of the Parthenon—during the thirties—had clearly shown the abundance of remains in these lower strata. It was reasonably hoped that a thorough search would yield new disclosures. It is true, a trial excavation by the French School in 1879, under the direction of the architect Paul Blondel, west of the Erechtheion, proved fruitless, so as again to cause hesitation. However, the director-in-chief of the excavations, Panagiótes Stamatákes—who had done good work at Mycenæ—would not allow his resolution to be shaken, and in the autumn of 1884 the work of excavating the entire citadel was begun, with the object of reaching the living rock everywhere or proceeding until the ancient foundations or remains were reached. Unfortunately Stamatákes died soon after, but his successor Panagiótes Kavvadías, who had distinguished himself at Epidauros, resumed the work with great energy. The architectural part of the task remained

in the hands of G. Kawerau, but Dörpfeld's sagacious advice was constantly available. Thus the entire surface of the Acropolis was systematically uncovered during 1885–91; every detail and the circumstances of each find were carefully recorded, and Kawerau drew a plan of the whole, which he had carefully surveyed, but unfortunately its publication has not yet appeared. Excavations were begun at the north of the Propylæa, and continued in a circuit all round the citadel.

Rarely has a plan begun and carried out systematically yielded such valuable results. Only those points will be touched upon which have been of great moment to science, or have presented new problems.

The discovery of the old "Pelasgic" wall proved of the greatest significance for the study and history of the Acropolis. This wall, built of irregular blocks, conforms more closely to the original form of the citadel-rock than the post-Persian walls; hence its characteristic windings, chiefly toward the south, where it sinks lower, following the level of the rock. West of the Propylæa only had a part of the Pelasgic wall always remained. Toward the north were found, beside walls, numerous other remains of ancient buildings, as of an ancient royal palace and a back staircase similar to the one at Tiryns; thus at Athens also a regular feature of these ancient fortress-palaces was proved to exist.

South of the Erechtheion a great artificially levelled surface had been observed. Soon after the beginning of the excavations, traces were here discovered in which Dörpfeld's sagacity recognized the remains of an ancient temple. Further research confirmed this, and an inscription, found later and pieced together out of innumerable small pieces, proved to have belonged to the temple, and gave its authentic ancient name as the Hekatompedon (sanctuary one hundred feet long).



PLAN OF ACROPOLIS

1 Propylæa. 2. Temple of Nike. 3. Parthenon. 4. Old Temple of Athene. 5. Erechtheion. 6. Temple of Roma. 7. Museum.

Beulé Gate

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The second official name, "the old Temple," which is also referred to it, appears to me incorrect.

From the different periods of the foundation Dörpfeld recognized further that the original Hekatompedon only —the temple a hundred feet long—had had a cella toward the east, and a treasury, of two apartments, with an opisthodomos toward the west, the outer colonnade being, however, a later addition; this seemed at first a strange assumption, but soon an analogous structure was found in Lower Italy, and the theory was confirmed by later discoveries. Both conditions of the temple belong undoubtedly to the sixth century; if, however, the temple is simply designated as a Peisistratan temple, the path to true knowledge is obstructed here as so often by "provisional truth." The original structure may belong to pre-Peisistratan times, or to the times of Solon; it may even be conjectured that it can be brought into connection with the institution of the Great Panathenæan, in 566.

The chief significance of these finds has been in connection with the history and conditions of Athens, but now a series of results throw light beyond it into the history of Attic art. While our knowledge of it in pre-Persian times had been only fragmentary and disconnected, the great wealth of plastic art now revealed in the lower strata of the Acropolis has permitted us to follow distinctly Attic sculpture during the sixth century.

The Attic *poros* stone, of both the hard and the soft variety, carved in the manner of wood, appeared as the oldest material. Several pediments of *poros* stone, with remains of brilliant colour, demonstrate in low and high relief the development of the Attic style of relief, as well as that of the composition of the pediments.

One of these pediments, that called the Typhon pediment, proved, as the result of Theodor Wiegand's investigation, to be of the Hekatompedon in its original con-

dition ; as it represents the end of the period of limestone sculpture, it gives the relative date of the first temple. Besides these sculptures numerous later marble fragments were found, out of which Franz Studniczka, and later Hans Schrader, restored parts of a pediment group of a Gigantomachia with Athene as the central figure, which had taken the place of the Typhon in the Hekatompedon, when it was enlarged and a colonnade added. Not only had our knowledge of Attic plastic art been greatly extended, but we also acquired definite chronological data for the rebuilding of the Hekatompedon.

Another glimpse of the plastic art of Peisistratan times was afforded by the discovery on the Acropolis of the wondrous series of maidens or *Korai*. These had stood on pillar-like bases, and must have given a peculiar charm to the pre-Persian Acropolis.

Each single statue had to be pieced together out of numerous fragments, a laborious task, shared by a number, but in which Franz Studniczka greatly distinguished himself. The older of these statues indicated distinctly the islands as their home. One resembles closely the Hera of Samos, dedicated by Cheramyes, while another ("the cheerful Emma"), with red hair and green eyes, betrays her descent from the log-like statue dedicated by Nikandra of Naxos. Women in richer attire suggested Chios as their home, where a school of sculpture flourished in ancient times. It was difficult to decide on the origin of others, but this can safely be stated: the more advanced plastic art of the Ionian Islands entered Athens about the time of Peisistratos, and with its over-refined Rocco style it supplanted the more sturdy Attic art, and drew the Attic artists into its school. Soon the pupils surpassed their masters, for the statue of Antenor unites in the happiest manner Ionian grace with Attic dignity and Attic serenity. So that when towards the end of the century Dorian

influences from the Peloponnese—where in the meantime bronzework had been developed — became perceptible in Attica, Ionian-Attic art was sufficiently refined to produce such graceful figures as the girl's head of the votive gift of Euthydikos, which recalls the art of Francesco Francia.

A lost chapter in the history of art had hereby been recovered from the rubbish heap of the Persians—an important and attractive one, for it forms the introduction to the great Attic art of the fifth century.

The sculptor Antenor, who later, after the expulsion of the tyrants, in his group of the Tyrannicides adopted the method of the Peloponnesian bronze-workers, was, according to the inscription on the base of his archaic female statue, the son of the painter Eumares, who, according to Pliny, was instrumental in the development of Attic painting. This coincidence is of interest, inasmuch as painting on archaic marble statues is very evident, although not in so great a degree as on the older limestone sculpture. The limitation of painting to certain parts of sculpture clearly overthrows the old theory, that either every part had been painted or none at all. But the close connection of the two arts became very apparent, and recalled the words of Plato, that the sculptor supplied the drawing and the form, but the complete effect of his work was only produced after the addition of painting.

Better understanding of painting on sculpture was, however, not the only contribution to our knowledge of painting gained during the excavations on the Acropolis. For from the depths of the Persian rubbish heap there emerged numerous specimens of clay tablets and potsherds. A fixed date, which the chronology of vases had until then lacked, was gained, as the origin of none of the objects could be later than 480; the greatest care being taken in determining the position of the finds

in the strata, and in demonstrating in each instance that they belonged to the original deposit. The consequences of this conclusion we shall point out in a later chapter (Chap. XI); it will suffice here to state that our historical conception was in consequence completely revolutionized, and that the entire period of red figured painting had to be pushed back two generations, its beginning dating from the time of the tyrant Hippias, before 510. Unfortunately the publication which will give a full account of this new material is still delayed.

The examples quoted clearly demonstrate how very important the excavations on the Acropolis proved. The work can, in every respect, be placed by the side of Olympia and of Delphi. Athene has assumed her place with dignity beside Zeus and Apollo. To complete the task, it remained to carry on the excavations outside of the Acropolis walls. The south side has been cleared of the rubbish accumulated by earlier excavations and the magnificence of its rock formation is clearly visible. At the north-west corner Kavvadias began in 1896–7 to clear the Pan grotto and its surroundings. Undoubtedly a continuation of the work along the "Long Rocks" of the north and east sides will solve other problems. The west slope is unfortunately not accessible to the excavator, in consequence of a modern thoroughfare. But at the foot of the Pynx Dörpfeld uncovered in 1892–7, with funds supplied by the Archæological Institute and some patrons, a great fountain of Peisistratan times which received its supply by a long tunnel. Is this the old Kallirrhoë transformed by Peisistratos into the Enneakrounos, the Fountain with the Nine Spouts?

Discussions still continue, but opinion leans more and more to Dörpfeld's point of view. In any case, we are confronted with magnificent waterworks of the age of the Tyrants, to be compared with the waterworks of

CORINTH

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Polycrates in Samos and the great fountain house of "one hundred columns," constructed by the tyrant Theagenes, uncovered by Dörpfeld's direction at Megara in 1899 by R. Delbrück and K. G. Vollmöller.

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Nor have investigations ceased outside Athens. Besides the Archæological Society, the various Archæological Schools in Athens share in these excavations. To recount all would be tedious; it will suffice to mention only those of the greatest importance. The American School has worked at Corinth since 1896, from 1896–1904 under the direction of Rufus Richardson and others.* At Sikyon in 1887 M. L. Earle carried on extensive investigations with successful results. The excavations carried on by the Dutchman Wilhelm Vollgraf at Argos 1902–4 take us back to prehistoric times. On Aspis, the hill to the north of the city, a prehistoric fortress was discovered; upon the citadel Larisa opposite, rock-tombs of Mycenæan times, and the remains of a city built upon these are of the Geometric period—these all afford new glimpses of the antiquity of this plain, so important in ancient Greek history.

The British School, under the guidance of its director, Ernest A. Gardner, and the architect Robert Weir Schultz, worked at Megalopolis in 1890–1 with excellent results. In most of these excavations, in the Peloponnese, the theatre was the principal object of investigation; at Megalopolis, behind the theatre was situated the Thersilion, a pillared hall more artistically designed than the Temple at Eleusis. Recently, in 1906, the British School has begun work at Sparta under its present director, R. M. Dawkins. The archaic sanctuary of

* From 1904–5, the director of the American School, Theodore Woolsey Heermance, continued work at Corinth, and died in Athens 29 September, 1905, of fever contracted there. The present director, B. Hill—who has done work on the Hekatompedon inscription—is continuing the work at Corinth.

Artemis Orthia, the site of a cruel cult, has been discovered, and a great quantity of votive offerings have formed the main results.

At Tegea, in 1888–9 Victor Bérard, of the French School, recognized the city walls, the Agora, and other important points in the city. But on account of the stubborn resistance of the inhabitants, only scant fragments of the famous Temple of Athene Alea, the masterpiece of the young Scopas, were revealed, sufficient, however, to allow us now to determine more definitely the style of Scokas (Chap. XI). Since then the French School has continued these investigations with great success. In the neighbouring Mantineia, Gustave Fougère, 1887–8, discovered three important slabs, part of the base of a group by Praxiteles, illustrating the drapery motives of Praxitelean art. More surprising even were the disclosures from the excavations carried on in 1889–90 by B. Leonardos and P. Kavvadías at Lycosura—traditionally the oldest city of the human race. The Messenian sculptor Damophon was the chief artist to decorate these sanctuaries, and for want of more accurate information he had been placed in the fourth century. But it now appears from architectural evidence of the temple remains, as well as the style of the sculpture, that Damophon belonged to the decadence, about the second century before Christ. In 1900 divers off the little island of Antikythera, near stormy Cape Malea, discovered rich treasures at the bottom of the sea. In Roman times a ship had foundered here (near the point where Lord Elgin's ship, the *Mentor*, was wrecked) laden with marble and bronze works of art. Piecemeal, these were brought up, and among them a bronze statue of beautiful style has been restored, which has been made a criterion for the historical determination of style—although its significance remains uncertain. This will be discussed more fully in Chapter XI.

The Peloponnese had had the lion's share in these investigations. But even Ætolia, which had yielded little in the arts, could now claim some success. The sanctuary of Apollo at Thermos, situated amid the mountains of the interior, formed the centre and meeting-place of the Ætolian League. In 1897–9, under Georgios Soteriádes, a very archaic temple was excavated. It was of peculiar construction ; a row of columns not only divided the long and narrow cella, but the apartments in the front and back of the temple as well. Where had the image of the god stood in a cella with two naves ? It had been conjectured that two deities must have presided in such a temple, but here it is only a question of Apollo. Thus a new question has been raised, which still remains unanswered. A couple of metopes, only painted and of very archaic style, offered something novel. Until now all metopes found had either been bare or with reliefs; painting taking the place here of painted reliefs again testifies to the equal value attached by the Greeks to the two arts.

The old Attic grave reliefs of the sixth century had given this impression. Beside the painted relief stele of Aristion, we have the stele of Lyseas, which is only painted ; upon the latter a rider is figured in the space below, upon the stele of Aristion a space had been left for painting, and upon a third stele the main figure, as well as a rider in a secondary space, are represented in relief, formerly painted. According to Plato, quoted above, the relief formed the groundwork for painting, giving it definite outline, and producing slight shadow effects.

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From Greece we must now turn to Italy. Under the influence of Luigi Pigorini the young Italian scholars have devoted themselves almost exclusively since 1870 to prehistoric research. This flourishes in all parts of

Italy. To this must be added the successful work carried on by Italians in Crete. Thus it may have come about that only in single cases have Italians devoted themselves to their classical treasures, which have mainly been taken in hand by foreign scholars. The German Archæological Institute in Rome carries on a great part of this work. In 1887 Eugen Petersen succeeded Wolfgang Helbig, and has since then, until 1906,* been its director. While scholars living in Italy, and especially Italians, frequently acquire a narrow outlook limited to things Italic, Petersen, returning from his travels in Asia Minor and a year spent at the head of the Archæological Institute in Athens, had a more extended horizon, and recognized at once, as a long-neglected field of activity, the pursuit of Greek traces in Italy. Since François Lenormant's journey along the coasts of Magna Græcia in 1880 no one had investigated Lower Italy in connection with Greek art. Petersen undertook this task, and in 1889 at Locri, on the south coast of Calabria, recognized, with his practised eye, the remains of an Ionic temple, which Paolo Orsi excavated. In Lower Italy, where Doric architecture prevailed, an Ionic temple was unique, and its excavation proved important, as its ground plan was archaic; so that it filled a gap in our knowledge of the more ancient Ionic style. The Temple was peculiar in many respects, having, for example, two naves, and the addition of a colonnade to the original temple is evident here, as had been the case with the recently discovered Athenian Hekatompedon (p. 251).

What had thus been attempted in a single case was successfully pursued in the following years, 1892–4, during two journeys by Otto Puchstein and Robert Koldewey. Although carried on without excavations, their renewed examinations of all the ruins of Lower

* When Körte succeeded Petersen.

Italy and Sicily were of great significance, and greatly extended our knowledge of old Doric architecture in the Greece of the West.

Some examples may be quoted. Near Selinus a pre-Dorian sanctuary appeared, of which the date could approximately be fixed; the result has been a general reduction in the estimated age of the Doric buildings. The ends of the pediments of two very ancient temples —the temple C at Selinus and the Temple of Ceres at Pæstum—showed that they had been turned down at the extremities, an otherwise unknown phenomenon of uncertain date. At Girgenti the position of the figures of Atlas was fixed with probable accuracy. By a close study of the altars before the temples, the so-called Basilica at Pæstum, with two naves and a façade of nine columns, was recognized as a temple; formerly it had been thought a stoa. A peculiarity of certain Doric capitals, a sharp narrowing of the column below the echinus, was proved to be characteristic of the Achæan city Pæstum.

A sequel to these studies of the architecture of Magna Græcia was the discovery by H. Graillot, in 1896, of a temple at Conca, near Antium, which Petersen immediately investigated. He demonstrated that about 500 a temple in Latium need not necessarily have had the Italic, but could have had the pure Greek ground plan, and thereby confirmed a fact that had only been known from scattered records—the influence of Greek art upon the Rome of the early Republic. According to the traditional view, Rome in those times had been entirely under the influence of Etruscan art and culture.

The studies undertaken by Petersen led to the dethronement of Etruria in favour of Greece in many respects. He proved that a bronze chariot, covered with reliefs, found at Perugia in 1812, which until then had been looked upon as one of the greatest Etruscan works of

art, was not Etruscan at all, but Ionian, presumably derived from one of the Ionian colonies of Southern Italy. What applied here to the chariot applied to other "Etruscan" works, for instance, the famous bronze candelabrum of Cortona. It has long been known that the Chimæra of Arezzo was Greek, in spite of the Etruscan inscription. And there can be no doubt as regards the superb statue of a youth known as the *Idolino* of Pesaro.

Petersen extended his verdict even to the famous Capitoline she-wolf which bears no trace of Etruscan character, but, as Central Italian art of this early period could scarcely produce so good a work, and as certain features suggested Ionian art, Petersen conjectured that it had been made by Ionian artists for Rome, at the beginning of the Republic ; a parallel to the contemporary Athenian Tyrannicides, inasmuch as the twins under the she-wolf represented the founders of Rome in contrast to the kings. To-day certainly early Ionian art is viewed with a more critical eye, and distinguished from Etruscan copies, and thereby new insight has been gained into Ionian art, particularly that of Southern Italy.

For example, the marble relief found at Nemi in 1791 representing the murder of Ægisthus, and now in Copenhagen, is undoubtedly a genuine old Ionian work ; this is confirmed by certain resemblances to the frieze of the Treasury of the Siphnians at Delphi (p. 150).

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Beside Greek models in Italic art, there appear the creative productions of Central Italy. The Etruscan, or rather the old Italic temple had, until recently, been only known to us from the not very clear description of Vitruvius, hence attempts at its reconstruction varied greatly. But light has gradually penetrated this domain as well.

In the garden of the Palazzo Caffarelli, in Rome, there had been uncovered in 1865, and again in 1875–6, the foundations of the Temple of the Capitoline Jupiter; measurements were taken, so that an idea of the general plan was gained. At Ancient Falerii (Civita Castellana) there were discovered in 1887 the remains of the ancient tripartite temple of Juno Curitis, the whole in a very damaged condition. At Marzabotto, however, in 1888–9, a number of ground plans were obtained, giving a clearer idea, and again at Alatri in 1889, and at Florence in 1892. The result was the same everywhere: in the place of the strict rules of Vitruvius a great variety of actual ground plans appeared.

A wall closed the back, a wide porch or vestibule for the observation of the heavens, the threshold of the cella, or the middle one of the three, which formed the consecrated central point of the whole: these features always recurred as demanded by the ritual. Otherwise great diversity existed in the plans, for example, whether the temple was on a level surface or on an elevation; if so, steps only in front led to it. Discoveries were also made of the terra-cotta decoration which had covered the wooden framework, thus illustrating its very ornate character; ceramics had been a favourite branch of Etruscan industry. An entire pediment group of terra-cotta of the Roman Age had been found in 1842 at Luni, near Carrara, but its significance was only recognized by Luigi A. Milani in 1885.

Beside the study of the older forms of Italic temples, attention was drawn to the long-neglected subject of the gradual transition from the Italic style to the Greek. The fantastic work in Roman architecture of Luigi Canina had long enjoyed a reputation it hardly deserved. But a more thorough study was undertaken by Carlo Promis in 1836 of the remains of Alba Fucens in the district of the Æqui. R. Delbrück has recently begun

connected investigations of the temples in Central Italy, and traced in the Temples of Signia, Norba, and Gabii the Greek influence on the form of the temple and its development, as well as the transition from wood to stone construction; finally, he has shown how towards the end of the war of Hannibal, the Asian mode of construction of Hermogenes was transferred to Rome, only to degenerate in strange soil. Temples that had long been known, as the Ionic Temple of Mater Matuta (the so-called Fortuna Virilis) in Rome, or the round Corinthian Temple at Tivoli, only now appeared in their true connection. The Temple at Cori, in the Volscian hills, in a most beautiful situation, shows how the Doric style deteriorated in Italy, and soon gave way to the Tuscan style.

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So great a transformation as was caused in Rome by the change of the quiet Papal residence into the capital of the Kingdom of Italy had not been witnessed since the days of Sixtus V. The topography of Ancient Rome became better known in consequence of new data. Eager and able workers, like Ridolfo Lanciani, Henri Jordan, and the secretary of the German Institute, C. Hülsen, were very active. The laying out of new streets and the erection of new buildings led everywhere to the discovery of fragments of ancient buildings or of sculpture, so that the Municipal Museum on the Capitol soon became too small to contain the incessant stream of treasures. Besides the accidental finds, systematic research was carried on.

The work begun by Napoleon III on the Palatine was continued, and extended nearly over the entire surface of the hill, so as to obtain a clear idea of this part of the city, which became a fashionable quarter towards the end of the Republic, and where the palaces

of the world-ruling emperors had been. The palace of Augustus, known from ancient prints, although only in a late reconstruction, is beneath the Villa Mills; the latter, it is said, is now to go. It is a question whether the gain to archæology will counterbalance the loss of the poetic cypresses. Many years of work in the Forum have enlightened us on numerous points of Roman topography and antiquity, and even shed rays of light upon the prehistoric times of the city, but the *Campo vaccino*, once so lovely, has now become an ugly pit full of trenches and mounds of earth. It is difficult to find compensation for this unattractive sight in the much-vaunted *lapis niger* over the grave of Romulus, or in the remains of the palace of the Vestal Virgins, or in the Temple of Augustus. The impression made by the Arch of Titus has certainly been enhanced, for only since the excavations has the ridge of the Velia, upon which it is situated, produced its full effect; seen from the Forum, the monument of the conquest of Jerusalem now appears on an imposing height.

Among the most valuable archæological acquisitions is the house of the Augustan Age, discovered in the garden of the famous Villa Farnesina in 1878, in consequence of the regulation of the course of the Tiber. Its well-preserved wall paintings exhibit the second style in a wealth of form, a beauty of design and brilliant colouring, which, as in the paintings of the Palatine, mark the artistic superiority of the great capital to the Pompeian country town.

The stucco decorations of the ceilings, imaginative and subtly suggestive as they are and free from all suspicion of the mechanical, exhibit one of the most artistic examples of decorative work in antiquity. These treasures, recovered at a place hallowed by modern art, are now the valued possessions of the newly found *Museo Nazionale* in the Thermæ of Diocletian.

Many other treasures discovered during the last decades are stored in the Museo delle Terme. One of the loveliest pieces of sculpture revealed in Roman soil was found in 1887, when the Villa Ludovisi was wantonly wrecked and transformed into lodging-houses. It is the back of a marble throne with a representation of Aphrodite rising from the sea, while to the right and left she is tenderly received by a nymph. A masterpiece of Greek sculpture, dating from the transition to the best period. This valuable piece has found a home in the Museo delle Terme with the entire Ludovisi collection, one of the most important private collections of papal Rome.

Here, in the upper storey, we meet the noble Vestal—the prototype of an aristocratic abbess—found in 1883 at the Temple of Vesta in the Forum. Among the bronzes is the unkempt pugilist, found in the Via Nazionale in 1884, a seated figure with a broken nose, swollen ears, and scratched arms, but nevertheless full of indomitable brutality, a work well executed and characteristic of the taste of later times; beside it the bronze head of a victor found at Olympia, although also of ungainly form, appears as the representative of a nobler race.

Some consideration was now devoted to old and well-known statues of the time of the Empire. Archæology had hitherto treated Roman art very grudgingly. The great number and great significance of the ever-increasing Greek works had pushed the Roman ones into the background. Friedrich von Duhn had in 1879–81 drawn attention to some scattered reliefs as belonging to the Ara Pacis. This the Senate had vowed in the year 13 B.C., after the Emperor Augustus had established peace in the empire, and had dedicated it to the goddess of peace three and a half years later. Eugen Petersen began its investigation in 1894, and finally established its form, the extent of the walls about the altar, and the distri-

bution and significance of the decoration. The true Roman solemnity of the frieze and its extreme fidelity to nature soon gained for the Ara Pacis its place as the foremost work of Augustan sculpture and as a characteristic parallel to the frieze of the Parthenon which represents Periclean Athens.

We had acquired something quite novel here; but what was its bearing on our knowledge of the presumably well-known official sculpture of the Empire? The work begun by Adolph Philippi in 1872 was resumed by Edmond Courbaud in 1890. But the most important task still remained. Franz Wickhoff's analysis of the reliefs on the Arch of Titus in 1895 and some works connected therewith, gave us a clearer view of art in the time of the Flavian emperors, although this work was somewhat impaired by the over-estimation of Roman sculpture to the disadvantage of the Hellenistic.

Konrad Cichorius' publication in 1896–1900 of the reliefs on the Column of Trojan first prepared the way for a more thorough historical and archæological treatment of a work which till then had been unduly depreciated. The photographs and casts taken of the Column of Marcus Aurelius at the expense of the German Emperor in 1895, under the direction of Petersen, A. v. Domaszewski, and the architect Calderini, provided a basis for its scientific study. On the one hand we have ethnologically instructive representations of the Marcomanni and other enemies of the emperor, while on the other hand appeared the transformation of the frequently poetic tale of Trajan into a dry matter-of-fact chronicle. Finally, on the Arch of Constantine Petersen distinguished the parts dating from the time of Trajan, the round reliefs, from the oblong panels, which belong to the time of Marcus Aurelius, thus definitely establishing important points in the art of the Empire. A frieze of Poseidon at Munich, which Heinrich Brunn in 1876 felt inclined to

ascribe to Scopas, but Overbeck and others more correctly ascribed to Hellenistic art, Adolph Furtwängler recognized in 1896 as belonging to the front of a great altar—now in the Louvre—representing a great Roman sacrifice, the Suovetaurilia, and belonging to the Temple of Neptune, erected by Gnæus Domitius Ahenobarbus about the time of the battle of Actium: Brunn had also thought of this as its original place. The great barriers found in the Forum in 1872, with representations in relief of the Forum and of official acts of Trajan, were ascribed by Petersen in 1898 to the balustrade of the tribune as their original place. This will suffice to show that our knowledge of the historical sculpture of the empire has been placed upon a secure footing. However, the most important examples of the architecture of these times still await investigation, which so far has only taken place in single cases.

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Work continued at Pompeii on the lines described above (p. 159). One part after another of the ancient city was uncovered. Public buildings, as the so-called Stabian Thermæ or as the completely destroyed temple of the city divinity, Venus, appear only rarely. The greatest interest was roused in 1894–5 by the discovery of the rich and well-preserved house of the Vettii with 188 paintings; efforts were made to preserve this private house as completely and perfectly as possible. The same method has since been applied at the *Casa degli Amorini dorati*, with its wealth of art objects. Gilt cupids below mirrors have given to the house its name. An unusual discovery was made in the neighbourhood of Pompeii at Boscoreale, where in 1894–6 a country house and a farm were excavated by A. Pasqui. Here everything was quite different from the town residence of Diomedes, and for the first time did we gain an idea of a *villa rustica*.

Recently our hopes had been revived that the long-neglected excavations at Herculaneum might be resumed. Charles Waldstein projected plans by which this great work would have been carried on by international subscription, and greatly exerted himself in its behalf. The Italian Government was at times favourably inclined and again opposed to these plans, according to the ministry in power, but finally the proud word prevailed, *Italia farà da sè.* We can only wait patiently and hope that our descendants may see the sister town to Pompeii brought back to the light of day.

The owner of the country home at Boscoreale was not able to save his superb silver, which had been gathered together, before the same catastrophe overtook his property as the neighbouring Pompeii. It formed a large collection when discovered, and, in spite of the Italian law prohibiting the export of works of art, soon found its way to Paris, and was acquired by Baron Edmond de Rothschild, who presented it to the Louvre, with the exception of two interesting cups, which he retained. It forms a magnificent treasure, a combination of Hellenistic and Roman objects. A cup which rapidly became famous represents a dance of death of Greek poets and philosophers, and probably originated in Alexandria ; another cup with handles has such graphic representations of storks that it must have come from the home of storks, presumably Asia Minor ; a sumptuous cup with a medallion of Alexandria or Africa was, undoubtedly, copied from an original from Alexandria. Tankards with historical scenes from the lives of the Emperors Augustus and Tiberius, and cups with Roman portraits, leave no doubt as to their Roman origin. Thus a distinction was clearly indicated between Hellenistic (not merely Alexandrian) and Roman art, a distinction which extended to certain marble reliefs having pictorial characteristics. The opinion of scholars has

recently inclined more towards Roman art, particularly in the better examples of the Augustan Age; this by no means excludes Hellenistic models, which in many instances may be assumed. Involuntarily one thinks of the relation of Roman poetry, under the empire, to Hellenistic models.

The discovery of the silver treasure at Boscoreale was not the first of its kind. In Normandy, at Berthouville, near Bernay, there was found in 1830 a great silver treasure from a Temple of Mercury, now preserved in the Cabinet de Médailles in Paris. It can probably be dated later than the treasure of Boscoreale, and testifies to the ostentatious and less pure taste of the late empire.

Some time after this, in 1858, there were taken from the Rhine at Lauersfort, near Xanten, silver decorations (*phaleræ*) of a Roman officer, viz. nine silver medals with representations protecting the owner from evil or magic. More important artistically was the great silver treasure found in 1868 on the parade ground at Hildesheim; it belongs mainly to the early empire, and may have been the dinner service of a Roman general, even if not of Varro. It has been restored with great care at the Berlin Museum. On the whole very similar to the treasure of Boscoreale, in some single pieces it excels it, as, for example, the great mixing bowl and the Athena cup—and it offers the same problems.

It cannot be doubted that the craft of the silversmith was most zealously carried on in imperial Rome. Pliny's saying, that the art of the silversmiths and engravers had expired, must be applied to their inventive genius, and not to technical finish.

These later examples have taken us beyond the boundaries of Italy into foreign countries, which we will rapidly traverse in the next chapter.

X

SINGLE DISCOVERIES IN OUTLYING COUNTRIES

THE two lands of classical fame are surrounded on all sides by countries of such great diversity as to render an entirely different point of view necessary, according as the art of a country developed along the lines of indigenous tradition or developed through Greek or Roman stimulus. The east naturally comes under the former, the west and the north under the latter point of view.

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In consequence of the preponderating political influence of France in Egypt, scientific investigations there had practically been in her hands since the middle of the century. Auguste Mariette, rather a fortunate discoverer than a profound investigator, excavated a series of temples of the New Kingdom or the times of the Ptolemies and the empire of Edfu, Dendera, Karnak, and Deir-el-Bahari. Abydos also owes to him its discovery. At the beginning of Mariette's activity, of great importance was the complete clearing from sand of the Serapeum at Memphis, a work of four years (1851–5). Unfortunately to-day it has again disappeared under the sand, and is awaiting a thorough excavation by the Egyptian Government, which began work at Sakkara in 1905. The main sanctuary of the later chief divinity of Egypt had then been visible with its graves of Apis and a great variety of sculpture; in one passage two

adjoining chapels, one Egyptian, the other Greek, made the twofold character of the Ptolemaic Age very evident.

Mariette, as the director of the Museum founded by him at Bulak, transferred to Gizeh and now at Cairo, excavated some neighbouring graves with very different contents. One need only refer to the squatting figure of a scribe at the Louvre, to recall the remarkable discovery that a vigorous art existed under the Old Kingdom in the fifth Dynasty.

Here was an undreamt-of new outlook into early Egyptian art. Free, as yet, from the conventional limitations and subservience to architecture of the later plastic art, this sculpture, though observing the law of frontality, and its own canons of style, exhibits greater freedom and independence, is based upon the closest observation, and possesses a wonderful mastery of technique—and that too in the middle of the third millennium! And the scribe was not a unique instance, for the village sheik soon surpassed him in popularity, and a great number of animated figures engaged in the occupations of daily life appeared beside these.

As director of Egyptian antiquities Mariette was succeeded in 1881 by Gaston Camille Maspero, who emphasized the historical and philological sides of Egyptian research and brought these studies to a high pitch of excellence. Besides the great Pyramids of Gizeh, he investigated the smaller and somewhat later Pyramids of Sakkara, structures of the fifth and sixth Dynasties. Long religious texts were disclosed in their interiors, affording insight into the religion of the age of the Pyramids. The oldest period of the Egyptian language was here for the first time discovered, and thereby a foundation acquired for Egyptian grammar, as established by Adolf Erman.

The perfect method with which excavations were carried on marked a further advance. The Egyptian

Government, under the direction of the French, excavated and partly restored the great Temples at Medinet Habu, Luxor, and Karnak. Other nations soon vied with the French, foremost among them the English, whose political influence in Egypt had greatly increased; the Americans soon followed, and, lastly, the Germans. The Egyptian Exploration Fund, founded in 1882, and the German Orient Society, which has been active in Egypt since 1902, are both carrying on thorough research work at important sites. For example, the former excavated under Edward Naville at Deir el Bahari in 1894–6 the great terrace-temple of Hatshepsut, and in 1903–7 he uncovered the oldest Theban Temple, that of the Dead, erected by King Mentuhotep, about 2100; it is a terraced structure leaning against the rocks; a pyramid once adorned the top, a later peculiar variety of the old type of pyramid. Flinders Petrie, who had gained some experience at home with British antiquities, has distinguished himself greatly by the energy with which he has undertaken new excavations. He has since 1880 transferred the zeal of an enthusiast to his work in Egypt, displaying the energy of a Schliemann combined with a much more scientific mind. After some investigations of the Pyramids he directed his attention to the uncovering of entire cities, according to the tendency in classic lands, recorded above (Chap. VII). His lucid reports followed at short intervals, always immediately after the excavations. Naukratis (1884–6) has been mentioned above; it had been of the greatest importance in ancient Greek commerce with the country of the Nile.

In 1889 he excavated near Illahun, a city of pyramids of the Middle Kingdom; not only did this disclose the character of Egyptian dwellings, but when the excavations were resumed there in 1899 a great find of papyri made it possible to fix astronomically the date of the Middle

Kingdom. It was here that the first Mycenæan sherds were found in Egypt, which Petrie discovered in great numbers in 1895, although of a later date by 500 years. Tell-el-Armana, the residence of the reformer King, Akenaton or Amenhotep IV, was excavated and aroused extraordinary interest. A realism quite unknown in Egypt distinguished the pictures of this heretic King, who would not worship the sun-god Ra, but the sun itself with its fiery rays. The landscapes and animal scenes in his palaces suggested a foreign "Achæan" influence at that time in Egypt; a view, however, recently opposed by Egyptologists. The clay archives of this palace had already been found in 1887, giving in cuneiform a surprising view of the diplomatic correspondence of the great powers, Egypt and Babylonia, *c.* 1400 B.C. Since 1895 the architect L. Borchardt has greatly distinguished himself by his scientific and methodical explorations. He excavated in 1899–1901 for the Berlin Museum—with generous support from W. van Bissing—the sanctuary of the sun-god Ra, near Abu Gurab, on the summit of which there had been an obelisk. The elaborate reliefs of this temple refuted the earlier views that the temples of the Old Kingdom had been without decorations.

We are indebted to Borchardt, in consequence of his excavations carried on in 1902–4 for the German Orient Society at Abusir, for a better understanding of the history of the building of pyramids and the extensive structures of which the pyramids only formed a part; an entrance gate on the shore of the Nile, during the inundations, led to a covered ascending passage, this to the funereal temple, behind which rose the pyramid.

The French at Abu Roash have worked along the same lines, and the Americans at Gizeh have investigated the funereal Temple of the Pyramids.

Borchardt has also illuminated to some extent the

form of the column in Egypt, and the excavation of the great Temple at Thebes mentioned above has afforded him an opportunity to develop the complicated history of the main parts of this gigantic structure (1905).

The investigations of the Tombs of the Kings of the Middle Kingdom have been most successful, rather in regard to the remarkable offerings found with the dead than architecturally. The fame of the valuable find made by J. de Morgan in the Tombs of the Princesses of Dahshur is fully justified. Incomparable technique combined with sumptuous material produced model creations in Egyptian artistic productions. The Tombs of the Kings of the New Kingdom at Biban-el-Muluk, excavated in recent years by the generosity of the American, Theodore Davis, have disclosed art treasures of equal merit and beauty. As the Egyptian soil is so very dry, even wooden furniture and utensils are perfectly preserved. It is owing to this circumstance, combined with the excellent embalming methods of the ancient Egyptians, that certain distinguished dead Kings of the New Kingdom have come down to us so well preserved that we know their features better than from statues or pictures.

The latest stages of research in Egypt have here, as elsewhere, extended the limits of our knowledge backwards, to the earliest dynasties, beginning with King Menes, and, indeed, further still to the dawn of Egyptian civilization. During the last ten years there have been engaged in this field E. Amélineau at Abydos; J. de Morgan at Nagada; Flinders Petrie at Abydos; and J. E. Quibell at Kom-el-achmar.

Borchardt recognized at Nagada in 1879 the tomb of King Menes about 3400, very different from later tombs, but instructive as to their origin. The wall paintings at Kom-el-achmar (Hierakonpolis), and the decoration on the numerous pots found in the prehistoric burial-

grounds revealed a childish art, while the ivory statuette of an aged King displayed a closely observant naturalism. The forerunners of the art relief of the Old Kingdom are to be found in the reliefs of the great cosmetic palettes of the older Kings.

By placing the older possessions of their temples aside, the ancient Egyptians have allowed us, who follow, to recover here and there remarkable glimpses of antiquity. Thus Quibell found in the Temple of Kom-el-achmar, in 1897, besides numerous examples of the first Dynasty, a life-size statue in copper of King Pepy, of the sixth Dynasty. And Legrain discovered near the Temple at Karnak in 1904 a pit filled with hundreds of statues, which had evidently been put there in Ptolemaic times.

In consequence of these finds of prehistoric and ancient art, the same questions arise in Egypt as in Greece, as to the origin of Egyptian art, and as to the age of the conventional forms which are so characteristic of it. Some progress is being made towards the solution of these difficult problems.

Our knowledge of the Ptolemaic-Roman period has also been extended. The unexpected information we have acquired of the administrative history of Egypt, which has come to us through the numberless papyri found, can only be mentioned here. Greek literature has likewise been enriched from the same sources by fragments of Bacchylides and Menander and Aristotle's Athenian Constitution.

There were found, in 1887, in the Fayum a great number of pictures painted on thin slabs of wood, which created great interest; these had originally, like the Egyptian and Mycenæan gold masks, covered the faces of mummies. These very interesting paintings, although of very different degrees of artistic merit, were at first placed in the times of the Ptolemies, but have later been recognized as mainly productions of the Roman

period. Besides adding greatly to our knowledge of portrait painting, those tablets have informed us as to the technique of tempera and encaustic painting and their occasional combination. Efforts have also been made to acquire fresh material in the domain of Hellenistic-Alexandrian art, a task to which T. Schreiber has devoted himself.

While Egyptologists are devoting themselves almost exclusively to Ancient Egypt—in the days of her glory and independence—there still remains a great deal to be done for our knowledge of Alexandria, as the centre of "Alexandrian" art; only a few decades ago the very existence of an Alexandrian art was doubted. Unfortunately the excavations undertaken at Alexandria by Schreiber, in 1898–9 and in 1900–1, at the expense of E. Sieglin, did not result very favourably. Giuseppe Botti has established in the Alexandrian Museum a definite place for the collection of this material. Besides collecting many single objects, he succeeded in preserving in 1900 a Græco-Roman tomb at Kom-esh-Shukafa, of several storeys and of rather complicated plan. While the art of Ptolemaic times was marked by a sharp separation between the native and Greek elements, we find during the Empire a syncretism of form and contents such as is peculiar to the later art of Egypt.

The Museum in Alexandria has found in E. Breccia a zealous director for its rapidly increasing treasures; and it is to be hoped that he will gradually collect and save the scattered remains of Hellenistic and Roman Alexandria. How little care has been taken in certain cases is demonstrated by the fate of a sanctuary of the early times of the Ptolemies erected by the admiral Kallikrates, on the seashore, near the capital, to Arsinœ, the wife of Ptolemy II, who was worshipped as Aphrodite. It was cleared of sand and hastily surveyed in 1865, and, so far as the stones have not been carried off as

building material, is now again completely enveloped in sand.

Only recently has it become possible to investigate the antiquities of Abyssinia, the fanaticism of the inhabitants and its inaccessibility rendering the work most difficult. The connection Germany has established with the Negus Menelik and the generosity of the Emperor William resulted in an expedition in 1906, in which the orientalist Enno Littmann, and the architects D. Krencker and T. von Lüpke, took part. Near Adua, at Aksum, the capital of the ancient Aksuman Empire, which flourished during the first four or five centuries after Christ, there were discovered besides remains of temples and palaces the great "Kings' chairs," erected in honour of the gods, and a number of huge monolithic stelæ. The latter, while rivalling the obelisks in height, imitate ancient wooden architecture with separate storeys and beams, and are of peculiar interest, inasmuch as they do not resemble any art in the land of the Nile. South Arabian influences have been conjectured, and in certain details Hellenistic influences can be traced.

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The civilization of Egypt had formerly been considered far more ancient than that of Mesopotamia, but of late this view has been strongly contested.

On the Tigris and Euphrates, as elsewhere, excavations have opened vistas into entirely unknown ages. The Assyrian discoveries mentioned above (p. 88) did not date further back than the ninth century, but the field of research was now transferred further south, to Babylonia, where the two rivers approach one another and finally unite. Here it was possible to penetrate to the most remote antiquity. Babylonia had frequently been the object of scientific journeys. Since the middle of the century the geologist W. Kenneth Loftus, 1849–52

and 1853–5, and the British Vice-Consul J. E. Taylor, 1853–5, had distinguished themselves by work done in the lower river basin. Our first glimpse into ancient Babylonian decoration and architecture was afforded by a carpet-like wall decoration at Warka, and by the remains of a step-pyramid at Mugheir.

But the results of the work carried on by the French Vice-Consul Ernest de Sarzec, who lived there some years, were of greater importance. His excavations carried on at Telloh in 1877–8 and 1880–1 secured for the Louvre a series of reliefs and statues of the petty Prince Gudea, which testify to an art, combining critical observation with eminent skill in overcoming technical difficulties in hard material, and in some respects exhibiting more freedom than all later Mesopotamian art. According to the results of late finds, these works will probably have to be dated about 2600, and thus would be contemporary with the beginning of art in Egypt under the Old Kingdom. That the art of Telloh is not the beginning or an early stage of an art can hardly be questioned, when its technical perfection is considered. A little later than de Sarzec's time the Americans began work at Nippur, in 1888–1900, under the direction of Peters, Haynes, Hilprecht, and Fisher. Great structures were discovered, step-pyramids (Ziggurat) and temples such as the "House of Bel"; while at Abu Habba the Temple of the Sun was excavated by the Turkish Museum under Father Scheil and Bedri Bey. The archaic plastic art which had been disclosed at Telloh was here supplemented by heads of bulls and goats cast in bronze. For Mesopotamia these discoveries signified the revelation of a highly developed early culture, comparable with the disclosure of the Ægean civilization in the Greek countries.

Besides these single sites of Sumerian and early Semitic art (the latter had existed early in Northern Babylonia),

Babylon appeared as the capital of the Empire of Hammurabi (*c.* 2200). The ruins of Babel, near Hillah, also those of the Tower of Babel, which were sought for at Birs-Nimrud (Borsippa), had early attracted attention, and were examined and described at various times by Layard, Rawlinson, and Rassam. In 1851–4 Jules Oppert, with Fresnel and the architect Felix Thomas, carried on extensive investigations here. But thorough excavations, on a great scale, were not undertaken, and the transportable results of the last expedition were lost in the river. Georges Perrot wrote in 1884 as follows: "There is more than one mound in the plain which no spade has ever disturbed, and each of these hillocks certainly corresponds to some structure of great age, to some group of houses or fragment of walls. It would be a creditable task to excavate these three or four great ruins, which are on the site of Babylon, to their very foundation, and to examine carefully their surroundings. Such an undertaking might be costly and tedious, but it would greatly extend our scanty knowledge of ancient Chaldæa; it would be an honour to the Government which would undertake it, but even more would it profit archæological science, if the task were carried out systematically."

The German Orient Society, founded in 1898, has undertaken this task, while the Prussian Government has provided the greater part of the funds, and placed them at the disposal of the Board of Administration of the Prussian Museums; the Emperor also has lent his support. The society fortunately selected the architect Robert Koldewey to conduct the excavations; he has been assisted by Andrä, Nöldeke, and Jordan. In the vast area of the city the chief group of mounds, "El Kasr" (the castle), was selected, and a start was made in 1899. It was not Old Babylon which was uncovered here, but the Babylon of Nebuchadnezzar, of the first

half of the sixth century. There is a double castle with a court, a hall decorated with tiles, innumerable rooms (in this castle Alexander the Great died); east of it the Temple of Ninmach and the huge entrance gate, covered with reliefs of the goddess Istar; an elevated paved processional way led up to it, the side walls of which were decorated with splendid lions on glazed tiles. Finally there was Esagila, the great sanctuary of the city god Marduk. These remains show great resemblance to those of the Assyrian palaces, to the latest of which they are near in point of time, but they surpass them in the delicacy and strength of their representations on coloured tiles. The temples show features not found in those of Assyria. The German Orient Society has investigated, besides Babylon, other places in the neighbourhood, as, for example, Fara and Abu Hatab, where very ancient cylinders with remarkable impressions proved of great interest.

In the year 1903 the excavations were extended to Assyria. To the south of Nimrud there towers above the right bank of the Tigris the steep hill of ruins of Kalat Shergat, the site of Assur, the oldest capital of Assyria. Layard had begun excavating the mound, and discovered a seated figure of black basalt, but then abandoned the enterprise. Andrä has recently uncovered here a number of structures, dating from the time of Assurnasirpal (ninth century): walls with great city gates, palaces, temples, and Ziggurat. Besides these, of somewhat later date (seventh century), there were found for the first time private Assyrian houses in a special quarter of the city. Andrä has also penetrated into more ancient strata, thus, for instance, he discovered down near the Tigris a quay wall of the fourteenth century. But, above all, there has appeared the chief sanctuary of Assyria, the temple of the national god Assur; its complete excavation may be hoped for.

A temple has recently been discovered outside of the city limits, which is equally remarkable for its extraordinary plan and for the stones used in its construction. In Assur a number of statues have been found, which is most uncommon in Assyrian art. Finally, numerous structures and works of art of the Parthian age have appeared.

Far to the west of the Tigris, midway between Marash, on the upper Euphrates and Alexandretta, on the Bay of Issos, but still under the influence of Assyrian culture, is the mound of Senjirli. A private Berlin society, the "Orient Committee," has repeatedly excavated here, in 1888, 1890–1, and 1894, at first under Humann and F. von Luschan, and again under von Luschan and Robert Koldewey.

In the midst of the city, which was surrounded by a double circular wall, was situated a fortified citadel. Different plans of palaces of the ninth and eighth centuries have been recovered. In the main they have the same characteristics as the corresponding Assyrian buildings: an entrance hall with two columns, flanked by towers (the Hittite *Chilani*), behind this a great transverse main hall with small apartments at the side and back. The entrance gates have an outer and an inner court flanked by towers. The lower row of freestone had rather clumsy reliefs, which have partly gone to Berlin, partly to Constantinople. As is frequently the case in Assyrian and Romanesque art, the columns rested on the backs of lions or sphinxes. Hittite or Assyrian influences seem to meet at Senjirli. A relief stele of Asarhaddon (671) points to Assyrian rule.

At the same time as the excavation of Senjirli, investigations were begun, with the object of tracing earlier civilizations in Palestine. The indefatigable Flinders Petrie began in 1890 work at Tell-el-Hesy, the Idumæan city of Lachish, east of Gaza. In a huge rubbish heap twenty metres high, he was able, with the help of pottery

found, to establish four periods: a prehistoric, a pre-Israelitic with many foreign influences, an Israelitic, and a Hellenistic. In Judæa, between Jerusalem and the sea, R. A. Stewart Macalister investigated in 1902–5 the great mound of Geser (Gazara) for the English Egyptian Exploration Fund; while further north along the west border of the plain of Esdraelon, opposite Nazareth, E. Sellin, supported by Austrian patrons, excavated in 1902–4 Tell-Taannek, and G. Schumacher, for the German Palestine Society, and with the support of the Emperor, in 1903–5, Tell-el-Mutesellin (Megiddo).

All these and minor investigations proved that the state of civilization had in antiquity been practically the same all over Palestine. They afforded an insight into Canaanite (pre-Israelitic) times, which had been more Egyptian in the southern parts of the country, and more Ægean and Hittite in the north, with cyclopean walls, great gates, and cult sites. At Megiddo a subterranean passage was found, as at Mycenæ, built of huge undressed stones. The time of the Israelites was here represented by altars, sacrificial columns, and private houses; at Tell-Taannek there appeared an altar of incense decorated with reliefs of rams' horns, "the Horns of the Altar." At Geser a palace of Maccabean times was discovered. Of the later Hellenistic times only the scantiest traces have been found. Numerous elucidations have followed the discoveries of pottery, gems—a seal of Jeroboam was found at Megiddo—and cylinders, while at Tell-Taannek a small document in cuneiform on terra-cotta was found. The latest important excavations are those begun at Jericho by Sellin. As all traces of the times of the Israelites and later settlements have disappeared, it is hoped that a picture of Canaanite civilization may be gained.

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To the east of low-lying Babylonia there rises in the form of terraces the Persian province of Susiana, where researches have recently been carried on. Persia had frequently been visited from the eighteenth century; in 1765 Karsten Niebuhr carried out his famous journey of investigation; in 1817–20 Ker Porter; in 1840–1 Charles Texier, the architect Pascal Coste, and the painter Eugène Flandin, travelled there. These journeys had been chiefly undertaken to the two famous ruins in the province of Persis, north of the Persian Gulf, to Pasargadæ and Persepolis; Stolze had in 1878 taken photographs here, and F. C. Andreas recorded his observations. In Pasargadæ are monuments of the time of Cyrus; the tomb of that great King has, in accordance with Arrian's description, been conjecturally identified with the so-called "Tomb of Solomon's mother"; while in the tower-like structures some seek grave-towers, though others, probably more correctly, consider them to be connected with the fire-worship.

At Persepolis was the famous terrace covered with reliefs, which had been founded by Darius, and enlarged by his successors, also palaces and reception halls rich in columns (the celebrated "Tchihilminar" or forty columns), chief of which was the hundred-columned hall of Artaxerxes. Besides these are the vast rock-tombs of the Kings of Nakshi Rustam.

Mention must here be made of the copying and deciphering of an inscription by H. C. Rawlinson, in 1837, at Behistun, giving an account of the reign of Darius.

While these palaces of the Persian Kings in their ancestral province had long been known to science, it remained to Marcel Dieulafoy and his wife Jane, thoroughly to investigate the rubbish heap of the most famous Persian capital Susa, which in 1885–6 had been visited by Loftus, and to bring its rich spoils into the Museum of the Louvre. The chief result was the Palace

of Artaxerxes Mnemon. Here, in 387, the embassy of Antalcidas was received, and the "peace of the King" was ratified, which again delivered all of Asia Minor to the yoke of the Persians. The envoys saw on the walls of the throne-room the rows of lance-bearing "Immortals," the remains of which still excite our astonishment in the Louvre; painted upon glazed tiles, in a sober and dignified colour scheme, they produce a singularly majestic effect. Similar friezes of animals are in even more subdued tones. Assyrian tradition is as evident in the technique and ornamentation as a national element in the life-size lance-bearers. A great capital in the form of a bull is very impressive. The knowledge of mural decoration gained by these excavations provides a most important addition to the picture of Persian architecture as presented at Persepolis.

At Susa the excavations have been resumed since 1897 under the direction of J. de Morgan. The most remarkable results are the numerous remains of old Babylonian art reliefs and terra-cottas. Of the foremost importance is a stele of Victory two metres high, of the old Babylonian ruler, Naram-Sin, of the beginning of the third millennium, which had once been taken as a trophy from Sippar to Susa; its vigorous reliefs testify to a well-developed Babylonian art in early times. Abundant vases and vase-fragments have been found; a peculiar impression is created on finding with these highly archaic pieces a number of sherds with Greek paintings of the fifth century, bearing witness to Greek commerce even in distant Persia. As France acquired in 1900 from the Shah of Persia the exclusive right to excavate in Susiana further results may be hoped for.

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Other excavations lead us to the shores of the Mediter-

ranean, its islands and its environs. Tombs will mainly engross our attention.

The island of Cyprus had been visited by L. Ross in 1845 for the first time with archæological aims; his success, however, had been only meagre. Its first energetic investigator was General Luigi Palma di Cesnola, who lived at Larnaca as American Consul from 1867 to 1876. He traversed the island in all directions, and in the course of his unwearied but somewhat amateurish efforts he opened many thousands of graves, which produced the important collection now brought together in the Metropolitan Museum of New York. Others followed him in the eighties, after England had taken possession of the island, Max Ohnefalsch-Richter, and in 1888 the British School in Athens.

Old famous places along the south coast, as Kition, Amathus, Kurion, Paphos, Marion, and in the interior Golgoi and Idalion, have been ransacked, and a great number of statues, although of rather monotonous character, have been taken from the temples and tombs. These are productions of the time when Cyprus was the meeting-place of Egyptian and Babylonian-Assyrian influences, and the Phœnicians controlled commerce. Next comes Cyprian pottery with a peculiar decorative style. Later we trace the gradual preponderance of Greek influences and of the Greek element in this very mixed population. But rarely do any works equal other Greek creations, such as the Relief at Golgoi of Heracles and Geryon or the Sarcophagus of Amathus, with its chariot and frieze. They are chiefly more or less stiff statues showing a lifeless provincial art (at Golgoi alone Cesnola found 800 pieces).

Newton correctly sought the explanation of this monotonous and dreary impoverishment of Greek art, and this obstinate attachment to archaic forms, in the sequestered position of the island, remote as it was from

the great current of Hellenic life. This entirely agrees with the fact which, since Lang's discovery in 1870 of a bilingual inscription at Idalion, has been established by the simultaneous exertions of many scholars, that even in the fourth century the Cyprians did not use the Greek alphabet in writing Greek, but made use of an antiquated and imperfect syllable script.

It was not a happy thought of Cesnola to lead a learned scholar astray by telling him of subterranean chambers in Kurion, in which the treasures were found, in the first the gold, in the second the silver, next the alabaster, bronze, etc. Or did the Cyprian treasures need some fantastic help, even of a poor joke, to excite our interest ?

The results yielded in the narrow strip of coastline once inhabited by the Phœnicians were unexpectedly rich, although the monuments were seldom of the ancient Phœnician age. The journey undertaken by Ernest Renan in 1860, at the desire of Napoleon III, and a later journey by Charles Simon Clermont-Ganneau in 1881, did little to enhance the poor reputation of the independent art of the Phœnicians. But the accidental discovery in 1887 at Saïda (Sidon) of extensive princes' tombs caused great surprise. They were of several storeys, and contained many chambers, with a number of sarcophagi of Sidonian rulers of the fifth and fourth centuries. These afford new evidence of the slight ability of native Phœnician sculpture, as they were either imported from Asia Minor or Greece, or at least were the work of Greek artists. The marble sarcophagi permit an exact survey of the development of art during these centuries. The earliest ones are Greek copies of Egyptian coffins, adapting themselves to the human form, and delineating the face with severe lines ; next comes the " Sarcophagus of the Satrap," illustrating the life of a prince in the modified style of Periclean times ; then the " Lycian Sarcophagus," executed in

the well-known forms of the Lycian monuments, about the time of the Peloponnesian War, and undoubtedly made in Lycia. All these still belong to the fifth century.

The influence of Praxitelean art is apparent in the "Sarcophagus of the Mourning Women," beautifully draped figures surrounding an Ionic tomb while lamenting their master; the Greek harem of Straton IV of Sidon (d. 361) occurs at once to the mind. Finally, the most admired of all, the superb "Alexander Sarcophagus," dates probably from the latter part of the fourth century. This, with its well-preserved colours, illustrates most perfectly the delicate harmony of painted sculpture. The reliefs, which are as well composed as executed, represent the decisive battle of Issos (333), the lion hunt of a prince in Persian dress, and other scenes; they all seem to point to Abdalonymos, a scion of an old Sidonian princely house, whom Alexander appointed King of Sidon after the battle.

To see this sarcophagus, not only the archæologist, but the lover of art, travels to Constantinople; for all have been transferred thither. How times change! Formerly the Moslem destroyed all works of art in the shape of the human form. Constantinople, under the Byzantine Emperors the home of art, became, after its devastation by the Franks in 1204, and its capture by the Turks in 1453, one of the poorest cities in works of art. Only since the middle of the last century has a small collection been formed in the ancient Church of Irene and its enclosed court, but the gradually increasing antiques were poorly housed beside the great collection of arms.

It is entirely owing to the ability of Hamdy Bey, a Turk who had been trained in Paris, that the Tchinili-Kiosk of Serai (Porcelain Pavilion) and the Museum of Antiques adjoining it rank among the finest in Europe. He has won a place for art study in the Turkish curricu-

THE ALEXANDER SARCOPHAGUS, CONSTANTINOPLE

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lum; he and his brother Halil Edhem Bey superintend all the antiquities in the Turkish Empire, and transport them to Constantinople, if they cannot be safely exhibited at the place where they are found. The new museum was founded in 1881. In the course of a few years its spacious apartments were filled with important antiques, until in 1887, by the acquisition of these Sidonian sarcophagi, which Hamdy Bey secured at once for Constantinople, it attained a brilliant position, shedding its rays upon the entire educated world. The great extent of the Turkish Empire, and our scanty knowledge of the artistic products of its remote provinces, lend a peculiar interest to the Museum of the Tchinili-Kiosk, even apart from its more splendid exhibits.

After this digression, caused by Sidon, we will turn south, to the land of the Edomites, to the city of tombs, Petra. Many travellers had visited it since J. L. Burckhardt, in 1812, for the first time saw and described the wonderful capital of Edom and the Nabatæans, with its narrow ravines and steep cliffs. In 1827 it was visited by Count Léon de Laborde; in 1839 by David Roberts; in 1864 by the Duke de Luynes, and in 1882 by the photographer E. L. Wilson; so that a view of the "treasure house" ("Chazne") had even appeared in popular books.

But only since the long sojourn there of R. E. Brünnow and Alfred von Domaszewski in 1897–8 have we acquired a complete view of the locality and its remains. With the exception of the "Chazne," which is a temple of Isis of the second century, and not a tomb, and of the "Castle of Pharaoh," also a temple, interest is to-day centred in the tombs, where a distinct development of forms can be traced. We see the ancient Nabatæan tomb in the form of a tapering tower, gradually transformed by the increasing admixture of Hellenistic elements; or Hellenistic tombs appear beside it, until finally under the

Roman Empire, broad, showy, overloaded façades of several storeys appear, the most ornate example of which we see in the Temple El Chazne.

Another ostentatious tomb of peculiar character towers above the Euphrates, north of Samosata, upon the Nemrud-Dagh, about 7200 feet high. It was discovered by the engineer K. Sester, in 1881, and investigated by him and Otto Puchstein in the following year at the instance of the Berlin Academy. Two expeditions again examined it in 1883, in May under Hamdy Bey, and in June under Karl Humann and Otto Puchstein, again at the instance of the Berlin Academy.

Upon this lofty eminence, visible at a great distance, King Antiochos I of Commagene built a splendid tomb in the middle of the first century B.C.; upon the summit of the mountain a huge tumulus had been erected, with great sacrificial terraces toward the east and west.

Let us listen to Humann after he had reached the summit: "The first impression was overpowering. As one mountain piled upon another appeared the tumulus upon the highest peak, rising forty metres above the terrace we had climbed. Seated upon raised rock seats are the colossal images of five divinities, only one of which remains in good condition. Involuntarily the eye seeks the distance. If, in a wild hurricane, when conflicting ocean surges have piled up huge waves to dizzy heights, and then tossed them hither and thither, the sea were suddenly turned into stone, it would, in a small way, give a picture of what was unfolded before our eyes for miles toward the east, north, west, and south. The white crests of the waves are here the snowy ridges of the Taurus. There may be continuous valleys and ravines, but to us it appeared as a wild confused mass, and the eye could only rest here and there upon a mighty mountain peak. This sea of rocks descends toward the south,

now and then you catch a gleam of the Euphrates, and the horizon beyond disappears in distant Mesopotamia."

These five gods—partly hybrid divinities, as the Zeus—Ormuzd in the centre—are gigantic figures, composed of huge blocks, and with eagles, lions, and great reliefs enclose in the rear the altar-court. Other reliefs with the ancestors of the King completed the enclosure, to the left Alexander the Great and Seleukos I, to the right Darius. The half-barbaric prince thus paraded his Macedonian-Syrian and Persian descent, the caricature of a Hellenistic King. There was some grandeur in the plan of the tomb, but its artistic execution was barbaric, without a trace of the Hellenic spirit remaining. Other large tombs, but not so elaborate as Nemrud-Dagh, are scattered over the entire country of Commagene; these also were examined by Humann and Puchstein.

The later royal tomb in Commagene recalls the ancient Lydian necropolis at Sardes. When the eye passes to the north, from the crumbling citadel-rock of King Crœsus, it perceives beyond the river Hermos, and its fruitful but not extensively cultivated plain, a long, low elevation with a "thousand hills" (Bin-tepè), and beyond it the calm Lake Koloe. It is a touching picture to see how, at one time, the great city of the living had been separated from the city of the dead on the Acherusian Lake by the broad river. These thousand hills are tumuli of Lycian kings and nobles; at the east end the mighty tumulus of King Alyattes, still seventy metres high, towers above all. How many secrets may be buried under these tumuli! The excavations made in the Tomb of Alyattes in 1854 by the Prussian Consul, Spiegelthal, and in 1882 by the English Consul, George Dennis, in other tombs, proved, however, fruitless, as the tumuli had already been robbed. Perhaps less pretentious tombs might offer more.

Similar tombs scattered over Lycia and Phrygia have

frequently been examined. In 1900, the two brothers Gustav and Alfred Körte selected the necropolis of Gordion, the ancient capital of Phrygia, and the scene of Alexander the Great's most popular feat, and at the expense of F. A. Krupp excavated five of its tumuli. They had to leave untouched the greatest tumulus, perhaps the tomb of King Midas (*c.* 700). These tumuli cover, roughly speaking, about a century and a half (700–550), and afford some insight into the low state of civilization of this Phrygian peasant and shepherd nation, whose favourite victuals were beer and cheese, and whose only known art-industry was pottery.

The most ancient finds can be traced far into the second millennium; later, Cyprian influence is very evident, and about the sixth century Greek productions appear, not only of the neighbouring Ionian cities, but of those as distant even as Corinth and Athens. A great surprise was caused by the finding of an early Attic cup in one of those tombs, originating from the same factory as the famous François Vase. Some red figured sherds permit us to trace the commerce with Attica to the end of the sixth century. Remains of the terra-cotta façade have been found, which had covered the front of the modest temple in which Alexander the Great severed the knot. These are of twofold importance, supporting first A. Körte's assertion that similarly decorated rock façades in Phrygia were sanctuaries and not tombs, and, secondly, proving Ramsay's view to be correct, which traced back this Geometric decoration to original terra-cotta facing.

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From the old tombs of Lycia and Phrygia let us return once more to Syria, during the last centuries of antiquity. While there remain few traces of Hellenistic times, and these, as at Antioch, are still awaiting a divining-rod to

bring them forth to daylight, there remain many monuments of that age of prosperity which the Roman Empire, from the time of Trajan, had revived here, as well as in Asia Minor. A group of magnificent city ruins are situated east of the Jordan, in the Hauran, and south of it. These had been visited by Guillaume Rey in 1857–8, by Ernest Renan in 1860, by Melchior de Vogüé in 1861–2, by the Duke de Luynes in 1864, and more recently by two American expeditions, the first directed by Howard Crosby Butler in 1899, the second by Butler and E. Littman in 1904. These late, bare, stone structures of the Hauran, built of great blocks, afford important evidence for the development of vaulted and arched buildings, and have become somewhat known through De Vogüé. In the south of the Hauran, Howard Crosby Butler has also shown that Nabatæan buildings existed. But the splendid remains of such flourishing cities as Bostra, Gerasa, Philadelphia, have not yet been satisfactorily examined; for that purpose it will be necessary to excavate. But it is high time; for with the railway in the neighbourhood, and in view of the new Circassian settlers, who like to build, the value of the old ruins for building material is increasing, and the reports of the disappearance of old buildings are most alarming. Government protection, even when ordered, does not signify in such remote districts. Science should, therefore, rescue all it can before it is too late.

Other interesting details were found in the so-called Hill of Hyrkanos (Arak-el-Emir), examined by the second American expedition. It lies east of the Jordan, opposite to Jericho. Cyclopean walls surround a great enclosure; the main building, probably a temple of the second century, shows a combination of Greek and Oriental style; a huge frieze of lions is a conspicuous feature.

Fate has been more favourable at Baalbec-Heliopolis than in the Hauran, although here also the railway, the

friend of man, but the enemy of ancient structures, has approached to within a short distance. Its first discoverer, Richard Wood, had been followed toward the end of the eighteenth century by L. F. Cassas, and in 1827 by Léon de Laborde and others. But thorough investigations of the famous temple ruins were only undertaken at the expense of the German Emperor in 1899–1904 by R. Koldewey, Otto Puchstein, and the architects B. Schulz and D. Krencker. The huge temple of the venerated Zeus of Heliopolis, the six standing columns of which to-day characterize Baalbec, has only now become known, especially as regards the artistic arrangement of its courts, and thereby established a resemblance to Herod's Temple of Jehovah at Jerusalem. The smaller temple throws light on the old Syrian arrangement of a raised choir with its crypt, which is of importance for the history of the building of Christian churches. The well-known round temple, with its strangely curved entablature, has, in consequence of the discovery of its podium with stairs, assumed a new aspect.

Thus these investigations have accomplished all that could be expected without carrying on excavations. It is to be hoped that the sister city Palmyra in the desert will some day experience the same good fortune. In the North Syrian highland, east of Aleppo, the Americans discovered in 1904 numerous temples, partly remodelled into churches and private houses, which could be dated (207–8–308).

Baalbec, Palmyra, and the cities east of the Jordan form a connected group of structures, which are characterized by many peculiarities in their general plans and in their separate buildings, as well as by their profuse barock decoration. These Syrian towns, together with the cities of Asia Minor, testify to the great prosperity attained in the times of peace under the Roman emperors,

which culminated in the second century, but continued well into the third. This is, however, not the only point of view from which this eastern group of buildings excites our interest. With them is connected the more important question of the relation of this art to that of Rome, the capital of the Empire. Did this art originate in Rome, as some believe, and is the Syrian style of architecture only a part of the imperial art, which is supposed to have permeated the entire extensive Roman Empire, radiating from its capital? Or is it—a view energetically represented by Josef Strzygowski—the ancient artistic force of the Orient which is stirring here, and lends these structures their peculiar character and special significance? The battle cry is, "The Orient or Rome?" It would not be seemly for one at a distance, and who gains his knowledge only indirectly, to act here as a judge in a discussion which on both sides is represented by able scholars, particularly as an opinion is rendered more difficult by the utter lack of remains of Syrian Hellenism, which forms the connecting link between the old Oriental art and the later Syrian of Asia Minor.

The question is undoubtedly one of the most far-reaching in the history of art; its importance extends far beyond the domain of ancient art, and is of special significance for the history of Christian art, regarding which the answer to the question, "The Orient or Rome?" will perhaps be, "The Orient and Rome."

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The old Roman provinces of Mauretania and Numidia, which extend along the south coast of the western Mediterranean, were opened to science much earlier than Syria. With the conquest of Algeria by the French in the thirties, one of the countries richest in ruins was gradually opened, which, like the Orient, had been in its

prime in the second and third centuries. Only rarely had travellers, as Thomas Shaw, 1720–32, penetrated to these unsafe regions. The French Government now undertook extensive scientific investigations in this land, which it had acquired with such difficulty; but excavations were rarely undertaken. Special recognition is due to those French officers who devoted themselves to recovering Roman antiquities, and in particular saved many inscriptions from utter destruction. For in so extensive a country, and one so thinly populated, over which Bedouins are constantly roving, not much could at first be done for the preservation of ruins and the security of what had been found; and it frequently happened that small local museums lost after a few years the greater part of their possessions. It was only after order had been established in Algeria, and more especially after Tunis, the ancient province "Africa," had been acquired by the French, in 1881, that a reorganization of archæological research became possible. This has been carried on in an exemplary manner by scientific men, as René Cagnat, Paul Gauckler, Stephen Gsell, and Père Delattre, who have gained enduring renown. The excavations have been well planned, and the uncovering of Timgad (Thamugadi), the African Pompeii, with its long streets, its Forum, its Arch of Trajan, which towers above all; or the uncovering of a Roman camp at Lambæsis, have amply rewarded the labour. What is not in good condition is restored or repaired. The abundance of Roman structures is most surprising. Temples have only rarely been found, but, on the other hand, amphitheatres, theatres, aqueducts, and nymphæa, baths, and tombs, are found in great number. The triumphal arches number seventy; they may be said to be the more solid forerunners of the later eulogies addressed to the emperors. With the buildings, which are mostly in a somewhat plain and bald style,

devoid of ornamentation, are combined numerous mosaics, a decoration very popular in Roman times, but hardly found anywhere so frequently as in Africa. In a single villa near Uthina, not less than sixty-seven have appeared. Sculpture rarely rises above the average of Roman work. A welcome exception are the remains of a collection found in Cherchel (Cirta), which King Juba II had formed in his residence. He had been sent as a hostage to Rome, and while there became a distinguished art lover, so that his collection contained excellent copies of Greek masterpieces, surpassing the ordinary copies of the Roman workshops.

The artistic character of the African provinces is, apart from many peculiarities, almost entirely Roman. Rarely do we get a glimpse of the older art of Punic Africa, and where it is the case, we distinctly see the influence of Greek art. It is so in the royal Numidian Tomb of Medracen, where the massive Doric half-columns suggest the older temples on the south coast of Sicily. Also in the coffin, found at Carthage in 1902, of a lady, whose portrait of the fourth century still retained when found its rich colouring, and exhibits the only slightly provincialized features of a delicate Greek archaistic art.

Similar conditions seem to have prevailed in Punic Spain, as yet little investigated. Here also monuments of indigenous art are rare. The sculpture which has been discovered since 1830 near the *Cerro de los Santos*, near Montealegre, in the province of Albacete, and which, with many spurious pieces, was placed in the Madrid Museum in 1872, first showed the mixed character of native art, subject both to Phœnician and ancient Greek influences. But this combination of styles is seen more clearly and delicately in a charming woman's bust found at Elche (Ilici), near Alicante, in 1897, which, through the instrumentality of Pierre Paris, soon found its way to the Louvre, where it forms one of the treasures of a

Spanish cabinet. Although surrounded by a barbarically elaborate head-dress, of which two huge wheels form the chief decoration, and loaded with artistic gold ornaments, the face has graceful features with something of the charm of the best Ionic-Attic maidens on the Athenian Acropolis.

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Asia Minor, Syria, and Northern Africa have led us to Roman provincial art, which we must still pursue along the northern boundaries of the empire. Germany and the countries of the Danube did not possess any noteworthy individual art, with the exception of that of Hallstatt, the Central European art, which seems to follow the direction of the Alps. Britain furnished the valuable tin, but offered even less in art than Germany. It was different in Gaul, where, beside the La Tène art, the Phocæan city of Massalia (Marseilles), was a centre of Greek culture, which it retained even after its political importance had been overthrown by Cæsar. The numerous ruins which are so salient a feature in Provence date only from post-Cæsarian times. Some of the most noted, as the Julian Monument at St. Remy—the significance of which for the history of art was first noted by H. Brunn in 1869—the Maison Carrée at Nîmes, the Pont du Gard of Agrippa, the Triumphal Arch of Tiberius at Orange date from the early Empire. These traces of "Italy in France" had attracted attention long ago in the writings of Aubin Louis Millin, 1807, and of Count Alexander de Laborde, 1816–17, and in a series of special publications; but a thorough investigation of the whole of ancient Provence is still wanting, which will satisfy the demands of to-day, and not only examine and record with scientific exactitude all the separate data, but will trace their general relations, above all the distinction between the purely Roman element and the after effects

of the older Greek culture. Although the latter are of the greatest importance to the history of the art of Provence, they have been too little investigated. Only when these have been thoroughly sifted can a recently raised question of Georg Löschcke's be definitely answered, namely, whether along the old route of the amber trade from North Germany to Marseilles, a route, as it were, marked out by nature, there flowed a current of culture and art inspired by Greece, traces of which might be found, for instance, in the monument of the Secundini at Igel, and in the reliefs found at Neumagen, near Trier, in 1877–8. A column with reliefs, of which numerous fragments were found at Mainz in 1906, and carefully restored, dates from the time of Nero, and, to judge by the representation of divinities upon it, its origin must be referred to Massilia. So much is already evident, that the route indicated formed the highway of ancient art in Gaul, compared with which the other localities where ancient works of art have been found appear as isolated oases.

France is covered by a network of antiquarian societies, which eagerly pursue local and provincial antiquities; the most important is the *Société des antiquaires de France*, established in 1804 in Paris. But while A. Bertrand and S. Reinach have established an admirable central museum of the antiquities of Gaul in the Museum at Saint-Germain, curiously enough France, where the centralizing tendency is so strong, still lacks a central authority by which these numerous local societies could be scientifically influenced, and although separated, could be directed in a common effort toward the same aim. Since France has established true universities, in place of the old faculties, and these are provided with chairs of Archæology, the necessary support for such organizations cannot be lacking.

Britain was only slightly affected by Roman civiliza-

tion. In addition to the northern protecting walls, accidental finds are occasionally made of baths, mosaics, etc., which, however, offer nothing peculiarly British.* Under these circumstances the archæological or antiquarian societies of the Island Kingdom do not need to exercise great activity in regard to Romano-British art.

In Germany, as in France, great activity exists in numerous local societies. The Roman remains at and near Trier, in the Rhine Province, with their relics of imperial splendour, are the most distinguished. At Wiesbaden a Nassau society began its work in 1827. More important was the one founded in Bonn by L. Urlich in 1814, the "*Verein von Altertumsfreunden im Rheinlande*," followed by other societies. For many years the Annual of the Bonn Society formed the central register, even for discoveries outside the Rhenish districts, until 1882, when Felix Hettner's "*Westdeutsche Zeitschrift*" appeared. Local provincial museums were established everywhere; the one at Trier remains the most noted. These societies at times undertook excavations. Old Roman cities on the Moselle and Rhine were investigated; Trier, Andernach, Bonn, Cologne, Neuss, etc. Villas were uncovered, the most noted at Nennig, near Luxemburg, and at Wasserbillig. But certain tasks still remain unfulfilled, as the exact delineation of the great funereal monument at Igel, the reliefs of which attracted Goethe's attention; nor have the reliefs at Neumagen been adequately published; for the "Giant columns" discovered in ancient Belgica a comprehensive publication is necessary, to answer certain serious questions connected therewith.

Here also the evil effects of the division of societies and their means are felt. An attempt at the centralization of finds has been made in the "Romano-Germanic" Museum at Mainz, established by Ludwig Lindenschmit

* [British archæologists will scarcely accept this opinion.—*Tr.*]

in 1852, in which are collected all kinds of typical originals, copies, and reconstructions. But an advance *viribus unitis* upon a great scale was inaugurated at the suggestion of Theodor Mommsen in the work undertaken by the German Empire of examining the Germanic *Limes* or frontier defences known as the "*Pfahlgraben*" (palisaded ditches).

This great task has continued for more than ten years since 1892, from the Rhine to the Danube, and numerous scholars have taken part therein. After many fruitless efforts, the plans, which are not everywhere alike, have become finally clear, and the significance of the *Limes* has become apparent. Although this knowledge may be of importance in connection with the study of ancient fortifications and history, and the relation which existed between Rome and its Germanic neighbours, the undertaking is of comparatively small consequence to the archæology of art, but resembles the instructive antiquarian investigations at Alesia and Bibracte, instituted by Napoleon III, or the recent researches at Numantia, undertaken by A. Schulten, at the expense of the Prussian Government. It is therefore to be regretted from the antiquarian point of view, not to speak of the artistic, when an important monument like the Saalburg is, in consequence of restorations, withdrawn from scientific research. The minor finds, as pottery, are of archæological interest; their artistic development can be traced from Greek and Gaulish beginnings through the later times of the Republic, the time of Augustus, of the Flavian emperors, etc. They have been gathered from the *Limes* and other sites, chiefly in the Rhenish districts. An important department of Roman art-industry has thus been elucidated, and an important chronological standard acquired for excavations. This has been proved at Haltern, where the Westphalian Society of Antiquaries combined with the Archæological Institute. At the

point where the Lippe became navigable in ancient times, two days' journey from the Roman legionary camp of Castra Vetera (Xanten), the excavation of a small fort on the bank, a harbour and a great permanent camp, has proceeded since 1899 without a single stone having been found; only by the varied nature of the soil is it possible to disentangle the complicated plan. But as all the objects, chiefly coins and pottery, date from Augustan times, and nothing has appeared of a later date, it can be definitely stated that this plan dated from the times of Augustus, and that the place must have been abandoned at that period.

These circumstances, which are applicable to Aliso, mentioned by Tacitus, support the supposition that this "castle on the Lippe," as Tacitus expresses himself, is Aliso. In the meantime a rival has appeared in the Roman castle found, in 1905, near Oberaden, a mile up the Lippe, where the neighbouring district Elsey has a name resembling Aliso. Is this Aliso ? and is the castle near Haltern the one to be designated as " the castle on the Lippe " ? Only more extensive excavations can solve these questions.

While the investigations of the *Limes* demonstrated the advisability of a union of scattered forces, Löschcke and Conze were instrumental in forming, in 1901, a Romano-Germanic Archæological Institute. Although individual societies did creditable work, they lacked association, and many acquired a narrow scientific horizon, a defect to which local societies are prone. The association of several neighbouring societies at Haltern formed an exception; the societies of South-western Germany had united in 1899 for a similar object. A central organization has thus been established by the Empire, which gives advice, or, if necessary, personal or pecuniary assistance to all societies from the Dutch to the Austrian frontiers. Without affecting the independence of individual societies, a possibility of united

action has been established. In scientific circles the Central Museum at Mainz, which has received assistance from the Government, would have been unanimously selected, in connection with which there would naturally have arisen a school for excavating, for the direction of museums and for scientific investigations. Unfortunately lack of foresight and other considerations have prevented this union, so that now the two cities of Mainz and Frankfurt share the task.

In Austria, in spite of the great diversity of the constituent countries, there has always existed a greater concentration in archæological studies. A modest place was acquired for them in 1853 by the central commission for the investigation and preservation of monuments. In 1876 A. Conze and O. Hirschfeld created in the Archæological-epigraphic Seminar of the University of Vienna a school which in its "Mitteilungen" became the organ of the scientific research of Roman antiquities in Austria. This work was completed in 1898 by the foundation of the Austrian Archæological Institute, which, under Otto Benndorf's* able guidance, superintends journeys and excavations, as well as the study of the archæological material. To mention only two examples of its archæological activity: since 1877 highly successful excavations have been carried on near Vienna to recover the ancient Roman stronghold Carnuntum; besides which, for years the scattered remains have been collected of the numerous monuments in the colony of Aquileia, the most important mid-station of the commerce of Italy and the north-east. Museums are being formed everywhere, thus affording a view of the artistic character of single districts, and at the same time giving shelter to the objects exhumed.

The scientific influence of Austria is felt beyond the borders of the empire, especially along the Danube.

* [Benndorf died in 1907.—*Tr.*]

The examination of the great monument of Adamklissi, in the Dobrudja, has been the result of such combined action. This had been observed by H. von Moltke in 1837, and was excavated in 1882–90 at the expense of the Roumanian Government, under the guidance of G. Tocilesco, and published by Benndorf and G. Niemann. It is a round tower similar to the Tomb of Cæcilia Metella. Near the top there was a frieze of metopes, above this a hexagonal plinth with a very damaged inscription of Trajan, dating from the year 109; above this a trophy; thus was the monument constructed, about which a quarrel arose as bitter as any described in the Iliad. Its origin in the time of Trajan was the first thought, to which a theory was opposed which referred it back to the times of the beginning of the Empire, immediately after the battle of Actium; an opinion was even expressed in favour of the age of Constantine. The question may be looked upon as decided in favour of the first assumption. Either was this the scene of the great defeat which the Dacians inflicted on the Romans in the reign of Domitian in 87, when about 4000 men fell, or Trajan may have gained a victory here in his first war. In either case, Trajan erected here, after the conquest of the Dacians in 107, a great trophy to "Avenging Mars," which gave to the inhabitants of the neighbouring village the name "*Traianenses Tropaeenses*."

The possibility of such a discussion was caused chiefly by the barbaric style of the relief of the metopes. For they make it evident how great a difference existed between the sculpture of the capital and that executed by unskilled hands in distant barbaric countries. But one need hardly go as far as the desolate Dobrudja to learn this; the Arch of Augustus, erected at Susa, on the Alpine route over the Mont Cenis, proves the same, and the relief of an altar found in Paris, of the time of the Emperor Tiberius, might almost be declared Roman-

esque. Although in many places, as, for example, on the military frontier of the Rhine, a certain common Roman character exists, yet local differences cannot be denied. Many tasks are still awaiting archæological solutions.

What we have observed in regard to the historical monuments of the Empire in the capital of Rome holds good in a still higher degree in the art of the provinces, which until recently has been much neglected. And yet, in all districts where Romans were or Roman influence was felt, it makes a strong appeal; for it must be looked upon as the preliminary condition of native art. The usually strong line of demarcation between Antiquity and the Middle Ages is not natural. As classical archæology has come into touch with prehistoric research, so now it must meet early Christian and medieval research, so that the great unbroken line of connection may become more apparent. Heralds are already calling to the new battle, and the new century can enter upon a wide and magnificent field of research.

XI

DISCOVERIES AND SCIENCE

OUR journey is ended. We have followed the "Archæology of the spade" during a century, making the circuit of the ancient world. Its influence on the science of archæology has been touched upon at different points; it still remains to answer more general questions. How have all these excavations and discoveries influenced, advanced, or transformed the archæology of classical art?—for only of this will we now speak.

Two periods may be clearly distinguished. In the first decades it was almost exclusively a question of accidental discoveries, which taught us to recognize some of the corner-stones in the history of the art of the sixth and fifth centuries: Sicily, Ægina, Athens, Bassæ, Lycia, and painted vases. During the forties excavations were undertaken more systematically in Egypt and Assyria, at the same time extending our horizon beyond the classical countries. Newton, in the fifties, was the first to pursue this more systematic method on Greek territory. He greatly widened the range of our knowledge, especially of the art of the fourth century; here the Mausoleum takes a foremost place. During the sixties the undertakings were more rigidly organized, to which finally was added a more definite technique of excavation, a method which at the same time preserved and reconstructed. Greater problems were presented, attacked, and solved. Art was pursued both backward and forward, on the one hand by the rediscovery of Hellenism,

which also threw new light upon the long-known Roman art; on the other hand, by penetrating into Greek and pre-Greek antiquity, which led to inquiry into the general conditions of the early European expressions of art.

We recognize the same two periods in the practice of archæological science. Here we must distinguish between the history and the elucidation of art.

In the history of art, Winckelmann's authority remained uncontested on into the twenties. Friedrich Thiersch and Alois Hirt tried to improve matters here and there, but not with much success. Goethe's friend, H. Meyer, still spoke of the Elgin Marbles, in 1817, as insignificant when compared with the "Phidian" colossus on the Monte Cavallo, and only accorded them some recognition in 1824, probably affected by the enthusiasm of his great friend. It seemed difficult in those days to go to the very source; people seemed content with the scanty literary evidence, with Roman copies, and the historical scheme which Winckelmann had based thereon.

For the elucidation of art Visconti's pleasing and elegant, but rarely profound treatment, was universally followed. His methods ruled in science, and helped to form the taste of the general public for the antique. Zoega's thorough, but specifically northern method, found little support. Although Zoega was not disinclined to mystical speculation in the history of religion, he maintained in archæological questions an essentially sober and objective method of explanation, which could not find favour at a time when the cloudy mythological syncretism of Creuzer dominated the minds of the romantically inclined. Gerhard also developed his ideas under the influence of Creuzer, and soon unfolded a system of mythological explanations of art which may have been convenient for classification, but can hardly

be extolled on the ground of objectivity. Zoega's other pupil, Welcker, on the contrary, tried to bring plastic art into the closest relation with poetry.

F. G. Welcker and K. O. Müller were the two archæologists who, most evidently, as influential teachers and effective writers, experienced the stimulating effects of the new discoveries, and with this new material indicated new aims to archæology. The pursuit of Greek art was for Müller only a part of the study of Greek spiritual development, in the investigation of which he found his life-work. His "*Handbuch der Archæologie*" (1830), with a collection of plates, which had originated in the practical needs of teaching, adopted the new methods. He wrote at a time when a survey of the whole was not yet made impossible by abundant specialization, and with a light touch he knew how to select the most important out of the great mass of material. The book thus served several generations, although the chapters on the history of art are less well written than the rest, and those are naturally the most antiquated to-day. Welcker too lived in a Hellenic atmosphere; religion, poetry, and art were for him indissolubly united, and he felt as a Hellene. He had not only looked through a window into one room of the great structure, but he was familiar with every corner, and to him each corner was only a part of the whole. Welcker possessed a more keen delight in art and poetry than Müller, combined with a most delicate feeling for the individual. Individual poets and artists appeared as special figures in the great current of development, and in his poetic intuitive spirit he created forms, which, if they were not always quite like the originals, pulsated with the blood of Hellas. Thus, when he first saw the sculptures of the Parthenon, the Sophocles, or the Apoxyomenos, they appeared as living individuals whom he had long known from afar; and the significance he attached to the contemplation of

statues, besides their study, he manifested by the foundation of the first museum of casts, the model institution at Bonn.

The great discoveries of vases, in the twenties and thirties, were of great significance for archæology. New treasuries of mythological scenes, far richer than could ever have been anticipated, appeared, and demanded appreciation and explanation. Thus the subject-matter of the pictorial part of the vase came into the foreground, and for a time science was almost lost in exegesis. It is to the credit of Otto Jahn to have freed science from the arbitrariness of unmethodical guesswork and barren subtleties, to have finally placed it on a firm basis. He had started with philology, a pupil of Lachmann and Böckh, and had transferred his philological methods to archæological exegesis. Raoul-Rochette had preceded him in combining artistic and literary sources. A survey of the general development which Jahn, like Müller and Welcker, kept constantly in view, promoted historical points of view, e.g. the recognition of the fact, until then overlooked, that the tribal differences among the Greeks exerted a decisive influence on their plastic art, as well as on their poetry, philosophy, and architecture (1846). Or, again, the demonstration that genre had been familiar to late Greek art as well as to Hellenistic poetry, a verdict frequently questioned then (1848). To-day we can hardly understand that such things should ever have been misunderstood.

This older mode of thought, which Jahn represented, still lacked one thing: the complete blending of the literary and these newly opened artistic sources; they frequently ran side by side like two streams, and rarely united. Thus, for example, Johannes Overbeck, in his "*Geschichte der Griechischen Plastik*," maintained through four editions (1857–94) of this much-read book the separation of the two sources; for instance, the

appreciation of Phidias remains separated from an analysis of the sculptures of the Parthenon. Even Heinrich Brunn, in his "*Geschichte der Griechischen Künstler*" (1853–9), which marks a great advance, limited himself almost entirely to the literary evidence, which he had critically sifted, and only referred to original works of art by known artists, as the Laocoon, the Borghese Gladiator, or the Apotheosis of Homer. Brunn was quite right and justified in critically examining the traditional history of art, and he is not to blame that the numerous histories of Greek sculpture were slow to adopt the History of Art as their subject, in the place of the History of Artists. And yet the incessant discovery of nameless works, often far surpassing those which could be ascribed to known artists, imperatively called for such a change.

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The change in our views and methods which has since arisen is due in the first place to the great enterprises which followed one another in rapid succession during the last third of the century. These enterprises, however, widened the scope of our vision both locally and temporally, and along with new knowledge have constantly presented new problems; they have also enriched and reinforced, not only our methods of excavating, but of understanding and applying results. But this does not explain everything; other essential conditions must be considered.

(1) The most obvious cause consists in the great facilities of travel offered by the railways and steamships. The ancient saying that a journey to Corinth is not for every one, has lost its literal significance. To-day it is possible for us to be, as Pliny says of the likenesses of famous men in Varro's book of portraits (*imagines*), "omnipresent as the gods." A stay of some

length in the south is a matter of course, and comparatively easily attainable for all archæological students. But also when it is a question of collecting or comparing material for special work, or even for single questions, the visiting of museums, which are almost always generously opened to all investigators, is infinitely easier than it was fifty years ago. Thus we not only have much more material at our disposal, but we command greater facilities for its use.

(2) Scientific education has also greatly altered. Fifty years ago by no means all the universities of Germany had chairs of Archæology; in Austria there was only one, in Vienna; in France, in Paris; and, to my knowledge, Italy and England had none. To-day hardly any European university is without such a chair, and its "laboratory" a museum of casts. Welcker, with the assistance of Baron von Stein, established in Bonn the first museum of the kind, which is systematically arranged for study. Welcker wrote in 1827: "This foundation is so opportune that I am convinced the other universities will follow before long." The prediction has been fulfilled, at first in Germany, and gradually in other countries where archæology is studied. Although the casts, at best, are only a makeshift, and the opaque plaster cannot convey an idea of the beauty of marble or bronze, yet, on the other hand, it has the advantage of not being limited, like a genuine museum of antiques, to a chance collection, but the entire sequence of ancient sculpture can here be exhibited in a systematic selection. Casts are also more useful for scientific work than originals, as certain important experiments can be made; for example, false restorations can be removed and better restorations can be tried, also casts can be bronzed after the originals.

There are still certain difficulties to be overcome, as it is not always possible to secure the most important and

instructive casts. A great central establishment is wanted, furnished with ample means, which under scientific guidance would produce the most important casts according to a definite scheme. Or, if this were too great a task for a single institution, it would be possible to think of a union of several (as has recently been established for the great undertakings of the academies); thus, for example, factories for casts in Berlin, London, Paris, Rome, Athens, and Munich, could unite and share the task, of course under the control of a scientific committee. But these are dreams of the future. A collection of the most important examples can now be obtained, as may be seen—apart from the Museums of Berlin or Dresden—in the University Galleries of Bonn, Munich, Strasburg, Leipzig, Cambridge, Oxford, Lyons, and Rome. These collections render possible those exercises which Otto Jahn was the first to introduce into the academic curriculum. Here the student learns the difficult art of seeing, and is taught to apply the principles of criticism and interpretation. A student who has thus become thoroughly familiar with one museum is prepared to advance science when going out into the realm of originals, particularly if there is combined with the casts a collection of originals as at Bonn and Würzburg. At Berlin and Munich large collections of originals are at the disposal of the student.

To the universities at home must be added the Archæological Institutes or Schools, the places of observation and work in foreign countries. The Archæological Institute in Rome remained alone for nearly twenty years. The French School in Athens was added next, but did not take part in real archæological work for some time. To-day, beside the French School in Athens, which has also extended hospitality to foreign scholars, there are actively engaged the German Institute, the American School, and the British School, to which

recently an Austrian has been added. Similar conditions prevail in Rome, which, however, as Greece is of greater importance archæologically, occupies a second place. Besides other work undertaken by these institutions, they devote themselves to the training of students, who, after preliminary instruction, which is ever-increasing in efficiency, have been sent to them, or present themselves of their own accord. They are made familiar with ancient sites and works of art by lectures, demonstrations, and journeys, and are employed, with more or less independence, at the excavations.

A very different training from that of former times!

(3) Another help in the study of art which cannot be overrated has come with the development of photography. Fifty years ago almost the only photographs of antiques known were in Italy, and those chiefly in Rome. To-day there is hardly any large Museum which does not publish its own photographs, and it is generally not difficult to acquire photographs even of scattered antiques. To-day a camera is a necessity for every archæological traveller. Photographs play an important part in the teaching of archæology. The collection, begun by Brunn-Bruckmann, and continued by Paul Arndt, of "*Denkmäler griechischer und römischer Skulptur*" is as indispensable for lectures as that published by Arndt and Amelung, "*Photographische Einzelaufnahmen antiker Skulpturen*," is for research work in antique sculpture. Processes of reproduction such as phototypes and autotypes, while not always artistically pleasing, render great variety and accuracy possible in the illustration of archæological works both scientific and popular. They can thus convey authentic knowledge of antique works to an extended circle, and place a living image before the beholder in the place of a lifeless or misinterpreted description. Even catalogues sometimes

follow this method, since the collections in Berlin set the example in 1891. But it is not only the great facility of reproduction that we owe to photography, but the manner of representation is still more to be considered. Engravings of earlier times bore the impress of the period or the engraver, and this character increased with their elaboration. Rarely did they reproduce the style of the original so faithfully as the first volume of the "Specimens of Ancient Sculpture," the "Ancient Marbles of the British Museum," or the best plates in the "Musée des Antiques," by Bouillon. Accordingly many were limited to mere outlines which, when carefully executed, sufficed for second-rate works of art, chiefly interesting on account of their subject, such as those in Zoega's "*Bassirilievi*"; but when applied to statues and busts of high artistic merit could only claim the value of aids to memory, as those in the Musée Napoléon by Piroli, or "*Denkmäler der alten Kunst*," by Müller and Österley. How very much the individuality of the draughtsman affected plates is clearly indicated in the elegant plates of the "*Gräber der Hellenen*" by Stackelberg. Compared with these methods, photography, in spite of certain inherent defects of foreshortening, and in spite of its dependence on the often unfavourable lighting of the objects, shows an infinitely greater fidelity and precision in the reproduction of all the nuances of style, technical peculiarities, and artistic effects of the original. Thus with the help of photography we have learnt to see anew, and it is greatly owing to its aid that modern archæology has turned so decidedly to stylistic analysis and appreciation. Some, like Heinrich Brunn and Karl Friedrichs, had taken this course even without photography, but that it has become the great high road of archæology is mainly due to our habit of viewing everything photographically, and to the possibility offered by photography of judging of the stylistic character of

originals without seeing them, and of their relation to other known works.

Photography has not only influenced archæology, but the History of Medieval and Modern Art as well. This as a science is even more recent than archæology, and, like Medieval and Modern History, learnt much from the elder science in its first stages of development, when modern and ancient art had not been so distinctly separated. But its special character was early distinguishable. In Germany alone Rumohr's (1827–31) "*Italienische Forschungen*," and Gaye's "*Carteggio inedito di artisti*" (1839–40), may be noted as the beginning of scientific method in the history of later art. In the former, stylistic considerations form the chief element in historical appreciation; in the latter the archives have yielded their treasures in an admirable manner in the service of the history of art. The history of modern art has at its disposal in both respects infinitely richer and more trustworthy material than archæology. As works of art, paintings in particular are so scattered, it would have been difficult to acquire such skill in stylistic analysis without the help of photography. By such means the mountain has come to the prophet, where his road to the mountain was barred. The purely artistic point of view has from the beginning more strongly influenced the history of modern art, which has not passed through a philological stage. This circumstance has perhaps made its judgments more subjective, but has also called forth certain critical methods, which can best be designated by the name of Morelli. Archæology has thus been influenced by the history of modern art in proportion as the former has endeavoured to keep questions of style and art in the foreground.

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Under these influences a revolution has taken place in

archæology in regard to scientific observation and treatment.

During the course of discovery new works or groups constantly appeared of which we had little or no literary or documentary evidence, and which could not be assigned a place in the scheme which has been constructed mainly from notices in Pliny or Pausanias. They demanded independent criticism and comparison with others already known and designated, so as to receive their proper place. At times the result was to disturb the traditional classification or to necessitate a new subdivision in it or an addition to it. Of such a nature was Brunn's theory of a special Northern Greek art. It had only slight support in the literary evidence that a certain Telephanes flourished in Thessaly about the time of the Persian wars; but, on the other hand, it found support in the peculiar "pastoso" style of a number of reliefs from Northern Greece. The doubts which this theory encountered, especially when it was connected with the name of Paionios, as the alleged artist of the Eastern pediment group at Olympia, were silenced more and more, since Brunn himself connected these monuments with the Ionian art of Asia Minor. This assumption was not so much based upon literary evidence as upon stylistic and general historical considerations.

Thus it has come about that with new finds not yet labelled, the old philological point of view has receded and the new stylistic analysis taken its place. The leader in this movement was Heinrich Brunn. As he was a most independent investigator and impressive teacher, his influence was very great. As in modern æsthetics, so here, everything depended on the recognition of the forms in art, and the history of art only pursued the development of the artistic form. This was the natural consequence of adopting stylistic analysis as the prevailing method of investigation. To-day no one questions any

longer the general justification of the movement. It is a well-known fact that a new movement is most intolerant to the one just preceding it. Consequently the well-developed archæology of style now depreciates the archæology of the philological period. Only works of art are of importance, all tradition is useless, in fact often cannot withstand the higher criticism. Those who speak thus do not realize that they are about to saw off the branch on which they are sitting. For how could we have built the history of art upon stylistic grounds, if we had not documentary evidence? Let us only compare the assurance with which we recognize the Diskobolos of Myron, and use it as a criterion, on the strength of two clear literary evidences, with the great insecurity which exists as soon as we only have stylistic analysis as a guide. The criterion of style is naturally subjective, and varies according to the conceptions of the individual critic, at times even according to the time and conditions of his knowledge. One need only remember the numerous views expressed in regard to the pediment groups at Olympia (p. 129), or consider that no less an authority than Brunn assigned the Diomede in Munich, on stylistic grounds, to the fourth century, while Löschcke, Studniczka, and Furtwängler place it, no doubt correctly, in the fifth century. Kalkmann, a man with a most subtle appreciation of proportions, was capable of "demonstrating" that the magnificent figure of a youth from Subiaco, now in the Museo delle Terme in Rome, a masterpiece of the liquid style of the time of Praxiteles, was an archaic figure, dating from about the time of the Persian wars! In the discussion about the falsely so-called Apollo of the Omphalos, rival claims are advanced for Pythagoras of Rhegion (Waldstein), the supposed Bœotian Kalamis (Conze, Furtwängler, and others) and the Corinthian Kallimachos (Schreiber). Who does not recall how modern paintings are frequently christened

over and over again by the *virtuosi*, and how here, in spite of a much more favourable condition of affairs, and with far more numerous works undoubtedly authenticated, it is still not always possible to obtain a unanimous opinion as to the true creator? Each critic believes his opinion to be the only true one.

Adolf Furtwängler has taken a method of his own to produce an agreement between literary tradition and the monuments which have come down to us. According to his statement, "in the Roman copies there has been preserved to us a certain selection made from the masterpieces of classical times, dictated by taste and knowledge at a time when the best culture prevailed. It was a choice of the best and most famous possessions of antiquity. Among these copies we must seek for the masterpieces mentioned by writers, those statues that were epoch-making, or indicated an entirely new direction in art." Starting with the hypothesis that the copies preserved can be divided among the artists mentioned by Pliny and Pausanias, he succeeds not only in allotting to great masters numerous works, but even shadowy and rarely mentioned artists, as Telephanes of Phocæa, and Praxias, the pupil of Kalamis, have important statues assigned to them, as the Ludovisi Hermes and the Albani Athene.

We know of two statues of Myron with certainty, the Diskobolos and the Marsyas. Following Morelli's method of individual study, Furtwängler tries to acquire for him a series of others; some, as the Perseus, show an entirely different style, and some an apparently more elaborate, but really more indistinct type, hardly to be reconciled with our earlier, definite starting-point. In Kallimachos are united the most divergent traits, so as to form an incomprehensible personality. In the case of Euphranor it is difficult to gain any firm footing. But details are always open to discussion, although many of

the artists' portraits created by Furtwängler have been accepted as the inalienable possession of the history of art. Yet his premise appears to me incorrect; that the choice of antique statues which has come down to us should correspond with the history of art, which Pliny compiled out of second-hand authorities, or with the works mentioned by Pausanias in his guide-book of Greece. How do we know that the taste of the Romans at the end of the Republic or at the beginning of the Empire—that is about the time from which most of our copies date—was the same as that of the sources of these writers? How much the taste of the moment or fashion may have played a part we can never know. The very foundations of Furtwängler's system of naming statues seem thus doubtful, and the uncertain element in his decisions seems greatly to outweigh the certain and the probable. Among his numerous ascriptions hardly one possesses so high a degree of certainty as the successful recognition of the Lemnian Athene of Phidias, of which we shall speak again.

But when such objections as look upon all criticism of style as subjective are set aside, it cannot be denied that from this method the history of art has received a fresh impetus. Instead of depending upon a scaffolding supposed to be firm, because derived from literary tradition, but really flimsy and scanty, we now have a structure rich in form and colour, which may indeed in the course of time require addition or rebuilding and change in its decoration, but may, on the whole, be looked upon as firmly established. The forms of artists who formerly wandered about the Hades of literary tradition as pale ghosts, have had blood put into their veins by the digging and investigating archæologists, and they speak to us in the language of living beings. We will try to demonstrate the progress made by a series of examples.

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Greek sculpture has acquired the most obvious gain. The eighteenth century knew but few works definitely assignable to known artists. Apart from the Laocoon, the Farnese Bull and similar works, Winckelmann recognized the Lizard Slayer of Praxiteles and Visconti the Cnidian Aphrodite by the same artist, the Ganymede of Leochares, the Praying Boy of Bœdas, and the Tyche of Eutychides; and Carlo Fea recognized in 1783 the Diskobolos of Myron. For a long time none were added to this number. An important discovery was made by Antonio Nibby in 1821, when in the Dying Gladiator (whom Byron's immortal verses celebrated as a Dacian fallen in the arena), he recognized, by his features, his hair, the collar about his neck, and his shield, one of the Galatians who, according to Pliny, had been erected at Pergamon, to commemorate the victories of Attalos and Eumenes over their formidable neighbours. This at once gave the key to the group of Galatians in the Ludovisi collection, of the same period and the same marble, now the pride of the Museo delle Terme. Pergamene art was thus placed beside the Rhodian, represented by the Laocoon and the Farnese Bull, and they formed together for a long time all that was known of "Hellenistic" art. This expression was, however, only coined in 1833 by Johann Gustav Droysen.

Only about the middle of the century were new discoveries made and works assigned to certain artists. It indicated the condition of our actual knowledge of the most important artists, that when in 1849 the Apoxyomenos was found at Trastevere, doubts arose whether it was the Polykleitan or Lysippan. The truth soon prevailed, whether Emil Braun or another was the first to decide the question, and the Apoxyomenos has become the mainspring of our knowledge of the great reformer in art, Lysippos. Some years later, in 1853, Otto Jahn recognized a reminiscence of another work of

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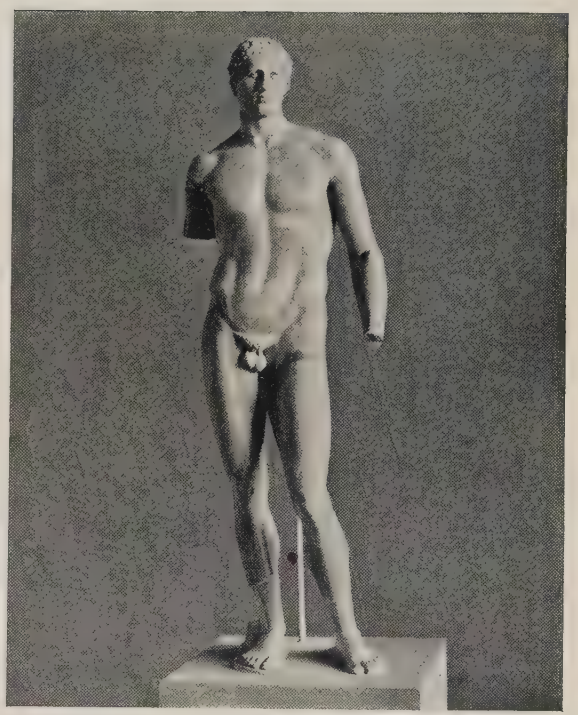

Photo, British Photo Co., Agiar

AGIAS, DELPHI

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Lysippos, the Kairos, in a supposed mosaic, which afterwards proved to be an early medieval relief. Jahn had distinguished as early as 1850 the three "Ephesian" types of the Amazon statues, among the great number existing. Attempts have since been often made to assign them to the great artists Polykleitos, Phidias, and Kresilas, although with varying results. In 1850 the characteristics of these three artists were still too indefinite to attempt such a distinction with success.

Such ascriptions as rested primarily upon stylistic observation began to be made in the fifties. Heinrich Brunn recognized in 1853 a bearded satyr, which had just then been placed in the Lateran, as the Marsyas of Myron, expressing lively surprise at the flutes which Athene has thrown down, although the figure had been incorrectly restored as dancing with castanets. His statement was supported by a reference in Pliny, by an Athenian coin, and a lost Athenian relief. Five years later Brunn could definitely confirm the identification by a thorough stylistic analysis. Myron was thus, through his Diskobolos and Marsyas, the first artist with whose characteristics we became familiar. In 1859 Karl Friedrichs followed with the brilliant discovery of the group of the Tyrannicides, two athletes in the Naples Museum, our first glimpse into archaic art. Here also a coin, and a relief, which had disappeared, supplied the authority, which was later confirmed by stylistic demonstration. But as two groups of the Tyrannicides had existed, an earlier one by Antenor from the end of the sixth century, and a later one, made thirty years after by Kritios and Nesiotes, doubts arose to which of the two groups this copy of the athletes belonged. The group has now been assigned to the later original.

An even greater sensation was caused by the finding in the same year, in 1859, in Athens, of an unfinished statuette, in which Charles Lenormant recognized a copy

of the Athene Parthenos of Phidias. On the strength of many notices and supposed imitations, attempts had often been made to reconstruct this famous masterpiece, and, as it proved, with some success ; but we now recognized for the first time the severe architectural pose of the colossal figure, and the arrangement of its accessories in the authentic form, so that a definite basis had been acquired for further research. In 1865 Conze was able to confirm and supplement this discovery by a marble copy of the shield which Newton had recently found in Lord Strangford's cellar, and secured for the British Museum. In 1880 another large duplicate of the same figure was found in Athens. At St. Petersburg Gangolf Kieseritzky published, in 1883, golden copies in relief of the head, with its rich head-dress, which made it evident that a gem of Aspasios in Vienna, already well known, was the best copy of the head. While the Parthenos has thus become constantly clearer to us in all details, how sadly fragmentary is our knowledge of the Olympian Zeus ! We owe thanks to J. Overbeck for recognizing in 1865–6 on some coins of the time of Hadrian the only monumental evidence we have ; otherwise we are almost entirely dependent on Pausanias' description. Nothing can demonstrate more clearly the progress we have made, through the discovery and identification of recovered copies, than a comparison of these two, the chief works of Phidias.

In 1863 Friedrichs demonstrated convincingly that the Canon of Polykleitos, the Doryphoros, could be recognized in the statue of a youth in the Naples Museum and in other copies—the same thought had occurred to Brunn about the same time. The sound, although somewhat monotonous manner of the Argive master was thus clearly defined, and Helbig had no difficulty in recognizing in 1871 in a similar composition at the British Museum, which Newton had acquired at Vaison (p. 102),

the Diadumenos of the same artist. Brunn discovered in 1867 another corner-stone in the history of art, by recognizing in the "Leukothea" of Winckelmann one of the finest statues in the Munich Glyptothek, the goddess of Peace holding the little god of Wealth in her arm—the Eirene and Plutos—by the elder Kephisodotos, the father of Praxiteles. The idea was, so to speak, in the air, for Friedrichs had in 1859 recognized the "child-nursing" goddess as the essential part of the group, and Stephani, Stark, Urlichs, and Overbeck thought of the statue of Kephisodotos almost simultaneously; but it was left for Brunn to confirm the supposition by the evidence of an Athenian coin in the Munich Cabinet of Coins, on which the group is reproduced, and the little Plutos can be recognized by his cornucopia. Further proof has since been provided by the discovery of replicas of the child. The group of Kephisodotos now formed a connecting link between the tradition of the Phidian school and the works of Kephisodotos' great son Praxiteles.

About the same time Brunn made an important contribution to our knowledge of archaic art by distinguishing through an exact analysis of the two pediment groups at Ægina two distinct periods of style, an older and more conservative one in the West pediment, and a later one in the East pediment, where new life has been infused into rigid forms. Finally Brunn closed this series of happy discoveries in 1870 by demonstrating that a number of half life-size statues, all belonging to a Roman find in 1514, and scattered in different museums, were remains of the four groups dedicated by King Attalos upon the Athenian Acropolis. From the wars of the Giants and of the Amazons, from the Battle of Marathon and the victories won by Attalos over the Galatians, from each of these remains were found, corresponding in style to those known from Pergamon. This was so evident that some doubt which had arisen in consequence of a mis-

interpretation of an expression by Pausanias was soon silenced.

These were nearly all the artists whose names could be assigned to long-known works. But in the meantime the era of new discoveries had arrived. At the beginning of the excavations at Olympia (1875) the Nike of Paionios was found; two years later the Hermes of Praxiteles. Both have been mentioned above (pages 128–131), and the questions regarding them which have since arisen. It may be worth mentioning that Emil Braun at one time thought of connecting the brother of the Hermes, the "Antinous" of the Belvedere, with Polykleitos, he was so impressed with the heavy form of the upper part of the body.

To continue with Praxiteles, Gustave Fougères discovered in 1883 at Mantineia the base of a group by this artist. The reliefs of the Muses upon it threw new light upon the drapery motives of Praxiteles. Benndorf and Furtwängler recognized almost simultaneously in a beautiful youth's head, with waving locks, found at Eleusis, the Chthonic god Eubouleus, a work which Georg Kaibel, in consequence of an inscription, had just assigned to Praxiteles. And Furtwängler believed he had discovered another original work of this master, in 1893, in a head of Aphrodite, in the Petworth collection.

While the figure of Praxiteles, the artist, which even before was something more than a shadow, now emerged into ever-increasing light, fortune did not smile upon his elder colleague Scopas. Newton had discovered in 1867 three connected slabs of the frieze, on the east side of the Mausoleum, the side assigned to Scopas, and had ascribed them to that sculptor, but without basing his opinion on any exact analysis. So when Brunn in 1882, after a careful study, considered himself justified on general grounds in depriving Scopas of these, many followed him. And yet in 1880 remains of pediment groups by Scopas had been found at Tegea, from which

Kavvadias and Treu inferred the characteristics of Scopas; and Treu rightly laid stress on their connection with the slabs of the Mausoleum. Upon this basis L. R. Farnell (1886) and Botho Gräf (1889) succeeded in establishing the characteristics of Scopas, and tracing them in a number of other works, so that his style is now tolerably familiar to us. Recently Georg Treu (1902) has recovered another of his works, by recognizing a copy of his famous Frenzied Mænad.

Three other artists had been engaged with Scopas on the decorations of the Mausoleum—Leochares on the west side, Timotheos on the south, and Bryaxis on the north. Of these artists we had met Timotheos first, in the sculptures of the Temple of Asklepios at Epidauros. Paul Foucart in 1890 assigned these to Timotheos, on the strength of the literary notices. The delicacy of the drapery in these works induced Franz Winter, in 1894, to assign to him a statue of Leda frequently copied. A statue of Artemis, which had been placed in the Temple of Augustus on the Palatine, was recognized in 1900 by Walther Amelung in a relief. The name of Bryaxis appeared in 1891 inscribed on a pedestal in Athens; the great lack of inventiveness here seemed to explain why the most unfavourable side of the Mausoleum, the north, had been assigned to Bryaxis. However, the statue of a Persian rider found there is one of the finest of the sculptures of the Mausoleum, and would justify the place of honour accorded Bryaxis in ancient tradition. More doubtful is his claim to some reliefs of extraordinary beauty, of which the most important belong to the side of Scopas or to the Sarcophagus of the Mourning Women. Winter found a resemblance between the well-known Ganymede of Leochares and the Apollo Belvedere, and so in 1892 assigned the latter to this spirited artist, amid general approbation. Finally, in the statues of Mausolos and Artemisia and the Quadriga we now recog-

nize the work of Pythios, the architect and fifth sculptor of the Mausoleum.

Some other identifications which have followed recent excavations may be mentioned. The very archaic Nike leaping through the air, which Théophile Homolle found at Delos in 1879, does not belong to the base and inscription, found at the same time, of the early artist Archermos of Chios ; still it takes us back to the infancy of sculpture, when this artist first introduced flying and leaping figures into Greek art. Soon the air appeared to be filled with these flying and leaping figures. The best-preserved of the archaic standing female statues found on the Acropolis at Athens was discovered in 1886. It could be almost entirely reconstructed, and has with great probability been connected with an inscription giving the name of the artist Antenor. In this statue we become acquainted with the artist of the earlier group of the Tyrannicides (p. 309) in a work made in his youth, while still under the influence of the Ionian school, but already far surpassing his masters. An unimportant herm, which appeared in 1884 with the name Plato, gave Winter an opportunity to introduce the name of Silanion, an Attic realist. Some disappointment was caused by the excavations of Kavvadias at Lycosura in 1889. The Messenian artist Damophon had been supposed to be a contemporary of Scopas and Praxiteles, but, on his work being discovered here, he proved a technically skilful but otherwise not very brilliant artist of later times, of about the second century. While the Tiber was being dredged in 1891 numerous fragments were found, out of which an Apollo was reconstructed, now in the Museo delle Terme, a statue still faintly suggesting archaic art, but of such extraordinary charm that E. Petersen's identification of it as a work of the youthful Phidias has been widely accepted. The excavations at Ephesos have yielded, besides, a number of other statues,

a beautiful bronze Apoxyomenos, which was at once assigned to the fourth century. Some time before the base of a statue had been found at Ephesos, with the name of the artist Daidalos, a grandson of Polykleitos. Pliny also mentions an Apoxyomenos by Daidalos. Upon this premise Friedrich Hauser decided in 1902 that this must be the statue found. And this is in so far probable, as the statue appears to be an example of Peloponnesian sculpture under Attic influence, which would be the case with the later generations of the school of Polykleitos. The main statue, among those found at Antikythera, seems to indicate the same tendency. Finally the excavations at Pergamon yielded in 1903 a bearded herm, which was described in its inscription as a copy of the " Hermes before the gate " of Alkamenes, that is, the Hermes Propylaios of the Athenian Acropolis. The head, which had already been known from other copies, some of them better, shows archaic conventional forms, though some features show more vivacity. Will the latter suffice, although wanting in some of the better copies, to enable us to recognize therein the ablest pupil and successor of Phidias, whose known works appear far softer ? Or shall we look for an older Alkamenes, of whom there are only vague traditions, who may even reopen the question as to the artist of the West pediment at Olympia ? Another discovery which is not only a gain, but suggests a new problem.

This duplication of Alkamenes was not by any means unique. For it was customary in Greek families for a grandson to take the name of his grandfather. That this would be the case with artists is very probable, for the same profession was frequently carried on in a family from generation to generation. Definite records tell us, for example, of two sculptors named Polykleitos, of two named Kephisodotos, and of two painters Aristeides, in each case a grandfather and grandson. It may

thus not be easy to assign traditional works to their rightful claimants. With Aristeides the question does not seem settled yet, whether the grandfather, as I firmly believe, or the grandson was the distinguished master, the famous "Aristeides of Thebes." The great name of Praxiteles has been involved in a similar discussion. We know from inscriptions that there were other minor artists of the same name in later times, but doubts were expressed when Otto Benndorf in 1871 placed beside the famous master of the time of Demosthenes an older Praxiteles of the fifth century, of the correctness of which theory I am convinced. Although some, being over-zealous, try to date him back to the time of Kimon, a calmer judgment would allow him to follow Phidias, about the time of the Peloponnesian war. This date would permit him to be the father of the elder Kephisodotos and the grandfather of his distinguished namesake. As frequently happens in tradition, the famous name has absorbed the less renowned.

A supposed double Daidalos, a Sikyonian or a Bithynian, has disappeared since Theo. Reinach, in 1897, recovered the truly Bithynian name Doidalses. Equally surprising and convincing was the recent demonstration of Emil Reisch (1906), that the artist name of Kalamis, of whom we had experienced great difficulty in obtaining a clear picture, really combined two artists of very different date. The first of the name flourished in the time of Kimon, and still retains his place in the history of archaic art. The second was a far greater artist, the only one of the two known to Pliny, and until recently unknown, a contemporary of Scopas and Praxiteles. Here, as elsewhere, greater discernment has widened our horizon. We mentioned above (p. 151) how Praxias and Androsthenes were pupils of Kalamis—one had felt inclined to attribute this to a misunderstanding of Pausanias—but now they assume their traditional

Photo, Gabier

LEMNIAN ATHENE, DRESDEN

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place as workers on the sculpture of the Temple at Delphi.

But to return to the recognition of important works and their artists. Further examples may be mentioned of long-known works, of which we continue to seek the creators. The Apollo Belvedere has been mentioned. I tried in 1903 to refer certain Pergamene statues to Epigonos, an artist whose significance has only been revealed by the excavations at Pergamon, and to recognize in the Dying Gaul, who, like another Roland, lies with his trumpet beside him, the "excellent" statue of a trumpeter by this master mentioned by Pliny.

In the same year Furtwängler published his striking conclusions regarding the Lemnian Athene, mentioned above (p. 307). We know from ancient records that this Athene was of surpassing renown, that her helmet had been laid aside, and that the outline of her face, her soft cheeks and beautiful nose were admired. Several writers—among them Puchstein—had recognized the Phidian character of a statue, the two best copies of which are in the Museum in Dresden. Puchstein had even thought of the Lemnian without a helmet. Both copies have, as is frequently the case with large statues, heads specially worked and inserted. To the one, the head does not seem to belong; in the other, the neck and face certainly belong to the original, while the back of the head and the helmet are modern restorations. Adam Flasch recognized that original parts of this head correspond with a superb head at Bologna. All united in admiring this head, but its interpretation varied greatly: was it youth, an Amazon, or an Athene? When Furtwängler removed the false head on the first statue in Dresden, and inserted a cast of the Bologna head, which had also been made to be inserted, the two fitted so perfectly that no doubt could exist as to their originally having belonged to each other. Every unprejudiced

person had to acknowledge that an antique statue of Phidias had been recovered. The head without a helmet suggested the Lemnian, only the glance very strongly directed to the side required an explanation. Furtwängler was able to find a solution even for this. He discovered on gems, upon which statues were frequently copied, the goddess gazing upon her helmet while holding it in her raised right hand. A most admirable work of Phidias, even if a little severe, dating from before the time of the Parthenon. At the same time it is the only head reproducing in a worthy manner this aspect of the master.

Finally, Studniczka, in 1902, combined a curiously twisted torso of a "Diomede," in the Palace Valentinelli in Rome, with a head of Perseus, which Furtwängler, as, I think, incorrectly, tries to connect with the Perseus of Myron. But we also know that Pythagoras, the contemporary of Myron, made a Perseus. It would be gratifying, if in this work we could obtain a more vivid idea of this distinguished master than we gain from gems or coins. Another step in this direction was taken by von Duhn, who in 1907, in the half-erased inscription of the charioteer, traced a connection with the Quadriga of Pythagoras.

These examples will suffice to show that during the last half-century stylistic analysis combined with new discoveries—not necessarily taken fresh from the earth, but such as may be found daily in museums—have brought a series of artists in living palpable form before our eyes. This is most keenly felt, in comparing important masters, as, for example, Euphranor, who have not been so fortunate, and about whose names consequently many hypotheses twine. But, on the other hand, we have gone a step further in having learnt, by the aid of new discoveries, to distinguish in some artists and their works different stages of their development.

The first step in this direction was taken on the Parthenon. We know from ancient testimony that the chryselephantine statue of Phidias had been put in position in 438, when the building must have been practically finished. And as the reliefs on the metopes, from definite indications, were not executed after they had been put in their places, but before, they must have been finished about 440; they would thus belong to the earliest sculpture on the Parthenon, a conclusion which their style confirms. But we were still in the dark as to when the building had been started, and whether it was completed in all parts in 438, until U. Köhler (1879) and G. Löschcke (1881) recognized that the fragments of a building inscription, which extended over more than fourteen years, belonged to the Parthenon. According to this, 447 was the date when the building was begun, and it continued for only nine years to the "Consecration." But the inscription further testifies that work continued on the Parthenon until 432, almost to the beginning of the great war. The great pediments, which are also mentioned in the inscription, can almost with certainty be dated in these last five years; perhaps also part or all of the famous frieze, which may very probably have been executed in position. Although the frieze shows the workmanship of different hands, it indicates throughout a level of style which far excels that of the best metopes. The groups of the pediments, on the other hand, vary from unmistakable severity to consummate perfection, from almost academic precision to an intense individuality and sense of life. Thus the metopes were executed in the forties, the frieze in the beginning of the thirties, while the pediment groups were presumably executed after the death of Phidias, or after he had left Athens, in 438, by his pupils. This may be looked upon as almost certain. But is it, therefore, permissible, as is generally done, to estimate and date all

contemporary sculpture according to this canon? It may be possible with all works made under the influence of Phidias or his immediate circle. But it would be ignoring all experience to try to force all the art of the time, even only Attic art, into this chronological strait-jacket. The meagre fragments of tradition at our disposal easily led us to form too narrow a conception of the abundance and variety of independent movements in an age so full of mental stimulus and stir. We are too fond of imposing rigid formulas, and mapping out a regular course of development for each department of activity, whereas a glance at reality ought to teach us how large is the irrational element in all evolution, and how often it is impossible to trace, even in the career of a single artist, a gradual and uniform progress from imperfection towards perfection.

A few artists, I think, allow us to follow this development. We have mentioned Antenor (p. 314), who, although of Ionian training, came later under the influence of Dorian art. Of Polykleitos, we first learnt to know the Doryphoros, which became for the ancients the canon of his style. A number of bases of statues have been discovered at Olympia with the name of Polykleitos; these still showed traces of the attachment of bronze statues, which permitted us to ascertain the position of the feet. One of them, on which an inscription gave the name Kyniskos, showed traces of the feet of a boy winning a race; this corresponded with a reference in Pausanias. Maxime Collignon, in 1892, surmised that this Kyniskos may be recognized in a boy's statue of Polykleitan character in the British Museum, and Eugen Petersen confirmed this, by comparing the position of the feet of the London statue (the left foot firmly placed, the right slightly drawn back and only resting on the ball of the foot), which he found corresponded exactly with the Olympian base. But the boy shows more

animation and a less "square" form and movement, than the Doryphoros and his congeners, which is not only accounted for by his youth, but is inherent in the style as well. The Doryphoros might thus have suggested a less developed style. It was therefore extremely interesting that Carl Robert, in 1900, showed from a recently discovered papyrus from Egypt,* containing a list of victors, that the victory of Kyniskos had taken place in 460, which places the statue at the beginning of the career of Polykleitos. We therefore recognize in this statue the early youthful style of Polykleitos, from which he gradually advanced to the more sturdy normal proportions and soldierly bearing of the youths who exhibit his canon. Furtwängler had recognized in 1893 that to the Diadumenos—otherwise representing the normal Polykleitan style—belonged a head at Cassel, which, according to form, expression, and hair, had always been considered Attic. And, as Plato tells us that during the thirties the artist spent some time in Athens, we evidently have here a later period with Attic influences. To this later period undoubtedly belongs the Hera of the Argive Heraion (after 423), whose head, corresponding to the coins of Argos, after a long search, Charles Waldstein appears to have (1901) happily rediscovered in a head at the British Museum.

Scopas may be compared with Polykleitos. We only learnt to recognize him with certainty in 1880, from the remains of the pediment group of the Temple at Tegea. These, with the entire temple, date from his youth (after 395), and undoubtedly indicate Peloponnesian training. His father, Aristandros, although coming from Paros, had worked in Sparta. As soon as he had learnt to know his style, others of his works were recognized, as the Meleager, perhaps also the Lansdowne

* Papyrus found by Grenfell and Hunt and published in Part II of the "Oxyrhynchus Papyri," No. 222. 1899.—*Tr.*

Herakles; these, combined with trustworthy notices of Scopas' long activity in Attica, clearly demonstrate his Attic tendencies, although Polykleitan influences are still perceptible in his proportions. This Attic influence in Scopas is plainly evident in the touching "Grave relief from the Ilissos," and the superb female head found on the Acropolis. The Palatine Apollo from Rhamnus likewise shows the influence of Attica; in 1900 W. Amelung recognized this also in a statue at Florence. We here learn how the artist treated drapery. Finally, we see Scopas harmonized and far excelling his co-workers in his reliefs on the Mausoleum, which are characterized by wealth and daring in the motives, as well as by delicacy of execution. To these works of Scopas must be added the recently found Frenzied Mænad, which the ancients looked upon as a striking example of his passionate manner.

Only lately have we learnt to recognize a development in the style of Lysippos. The Apoxyomenos has, since its discovery in 1849, been regarded as the normal example of his style, which is well marked in all its aspects. The seated Ares of the Ludovisi collection represents essentially the same stylistic characteristics, and was therefore assigned in 1853 by Welcker to the circle of Lysippos. This generally accepted theory, however, was considerably shaken when Adam Flasch, in 1892, recognized in a better-preserved copy of the head in Munich distinct traces of the style of Scopas which had now become known, although opinion inclined rather to see in it an Ares of Scopas, recorded as having existed at Halicarnassos, in spite of its decided Lysippan traits. However, a solution was found in consequence of a happy and sagacious discovery of Erich Preuner in 1899. In the excavations at Delphi there was discovered in 1897 a group of marble statues of the family of a Thessalian prince, among them the statue of Agias with a poetical

inscription, recording his victory in the games. Preuner was able to prove, from papers of Stackelberg, that the same epigram had been on a pedestal at Pharsalos, the home of Agias, but with the addition that the statue was the work of Lysippos. Thus the well-preserved statue at Delphi was a copy of one by Lysippos, and, as could be proved, of his early period (about 340). The future Lysippos is indicated in the position and carriage of the body, but while the upper part is still heavy, perhaps recalling Polykleitan traditions, the face clearly shows traces of the style of Scopas. Shall we therefore, with Percy Gardner, renounce our entire former conception of Lysippos, and dethrone the Apoxyomenos? Or is it more likely that Lysippos, who is said to have acknowledged Polykleitos and Nature as his masters, should also in his youth have followed Scopas, the foremost artist of the preceding generation? It is true, he later abandoned all these influences in favour of his new attitude towards Nature. These considerations may also throw light on other works, as the Herakles of the Lansdowne collection. It is impossible to suppose an artist to whom 1500 statues are ascribed to have remained on the same level, especially so great a master as Lysippos.

These examples of our progress in recognition—all from the later decades—encourage us to hope that with continued discoveries and observations new life will constantly be infused into the history of the development of individual artists—a promising outlook for the new century!

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Naturally similar efforts have been attempted in painting. Attic vase painting formed the starting-point, as only here existed a consecutive series of Greek paintings. The chronological sequence had in general been established of black-figured and red-figured. Although some single fragments found on the Acropolis demonstrate

that vases had been painted with red figures before the Persian wars (480), the class, as a whole, was dated from the time of Kimon, and through the entire fourth century. We had learnt from Winckelmann to distinguish therein a "severe" and a "beautiful" style, and to separate them chronologically. Not much attention had been given to the names of the makers of vases (ἐποίησεν) and the painters of vases (ἔγραψεν). I remember causing a shaking of heads among my colleagues during the sixties when in my lectures on the history of art I conceded a place to the most important or characteristic vase painters in the development of art.

In 1879 appeared Klein's "Euphronios." By a searching examination of the style and subject-matter of the work of a number of vase painters, their artistic individuality appeared, their personality was brought into relation with their work, and an individual development in this branch of art was shown. It was our first clear picture of the Athenian Kerameikos, with its great potters' workshops, with its cult of handsome boys and youths; at times exhibiting a gay life, where wine, woman, and song reigned, and the professional envy of the potter, of which even Hesiod had sung. Euthymides, a rather backward painter, although with aspirations, boasts on a vase that this time he has painted better than Euphronios has ever done; upon another he applauds himself with "Bravo"; upon a third a hetaira drinks his health. That advertising was known is very evident. Klein distinguished two periods, the older "circle of Epiktetos," which made the transition from the black-figured to the red, and the younger circle, which, in contrast to the old-fashioned masters like Euthymides, chiefly gathered about Euphronios. Eight of his works have come down to us, and permit us to follow his development. Among his pupils and followers the most distinguished are Brygos, Hieron, and Douris.

This emancipation of Athenian vase painting Klein dated, according to the usual view, in the time of Kimon.

Then, when the Athenian citadel was being cleared, during the eighties, of the " Perserschutt," that is, of the debris, which dated before the destruction by the Persians in 480, sherds appeared of vases by Euphronios, Hieron, and others. A marble base even mentioned the " potter Euphronios " as the dedicator of a votive offering which he had given as his tithe. It became evident that Euphronios, as well as the younger Hieron, had to be pushed back beyond the time of the Persians ; and if an introductory period were allowed for the beginning of the movement, it would have to be placed in the time of the tyrant Hippias, before 510. This explained the fact that the names of the youths frequently mentioned by painters on account of their beauty agreed in so many instances with those of persons in the circle of the tyrants. The chronology of vases had thus to be pushed back considerably, about half a century.

This was not merely one of those numerous discoveries which lead to the changing of a single date. On the contrary, the first decades of the red-figured painting mean nothing less than a complete emancipation of the Attic spirit of art, its liberation from the bonds of archaic art in drawing objects, and composition. As by this same excavation on the Acropolis the Attic sculpture of this age was likewise revealed to us, a comparison showed that some of this same spirit is perceptible in sculpture, but the new tendency is much freer and stronger in vase painting. The painting of vases means the handicraft of painting ; how much greater then must this emancipation have been during this transition period in the great art of painting, totally lost to us !

It is obvious that Greek painting developed earlier than Greek sculpture, a truth I proclaimed in 1884 before the clearing of the Acropolis, but to ears that would not

hear. Or can this have been an isolated or accidental phenomenon ? Since Welcker's time, in 1838, the general impression has prevailed, that Phidias had been greatly influenced by the somewhat older painter Polygnotos. Greek painting further experienced about the time of the Peloponnesian war a revolution through the transition from the technique of fresco and the historical compositions of wall paintings to tempera painting with light and shade and the easel picture—detached from architecture—so thorough a transformation that sculpture could only follow slowly. It has never been doubted, since Hellenistic art has been an object of study at all, that during that period everything was dominated by pictorial considerations, and that even sculpture attempted illusion. Finally, it can be proved that even in the earliest times painting developed more rapidly than sculpture, which is hampered by its material and a more troublesome technique. It is thus obvious that through the whole history of Greek art, painting was the directing art and not sculpture, although this has always been more familiar to us. How we distort the picture of Greek art by not only separating sculpture from architecture, but also from painting, which always leads the way !

The dating back of the older " severe " style of painting to the time before the Persian wars necessarily affected all the other classes. All the others had to follow. Carl Robert distinguished in 1882 a special class consisting chiefly of larger compositions with numerous figures extending over undulating landscapes, the movements as well as the features of the separate figures aiming at distinct characterization. And this is clearly the case in what we are told of the paintings of Polygnotos. Robert's conjecture, that these vases could be traced to Polygnotan influence met with almost universal approval. They also became helpful to Robert while

reconstructing the compositions of Polygnotos—of which we possess more or less detailed descriptions—and he thus, as it were, put his theory to the test of experiment.

Polygnotos worked in Athens during the time of Kimon and the first years of Pericles; thus the date given for the handicraft influenced by his paintings would be about the middle of the fifth century. If the next development in the painting of vases bears unmistakably the stamp of the serene and dignified manner of Phidias, this may be less owing to the immediate influence of Phidias, as Franz Winter assumed in 1885, but rather to some influence, no longer traceable, in the great art of painting, which affected sculpture as well as vase painting. This would most clearly explain, for example, why the same composition is rendered on two metopes of the Parthenon, and upon an elegant vase of the same period—Helen seeking protection, assisted by Aphrodite and Eros, near the image of Athene, from the persecution of Menelaos. The vase, however, retains Peitho the companion of Aphrodite, while in her place, on the metope appears a commonplace companion of Menelaos.

The new painting on clay tablets which began in Periclean times, inspired vase painters to paint on a white background in delicate colours or to enrich the composition by a greater variety of colours. This attempt was doomed to failure, through the natural limitations of painting on clay. It has, however, become increasingly clear, that the defeat of the army at Syracuse in 413 destroyed the prosperous trade of exporting Attic pottery to Italy, and thus deprived the Athenian potters of their best market. Furtwängler surmises that this trade was carried on by Thurioi, a colony of Pericles. Tarentum assumed the position of Athens, and continued the Attic tendency to paint in polychrome, as we see in the beautiful vase in the British Museum representing Peleus and Thetis. The Tarentine

compositions were, however, somewhat stiff and gaudy, as if to show, in the language of Horace, the difference between Attic coin and Apulo-Lucanian counters.

Thus new discoveries and more exact methods have led to a marked displacement in the history of painting.

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In architecture it is not so much a question of stylistic analysis as of a close observation and a thorough knowledge of ancient architecture, even in its technical aspects. Thus by close observation it has been possible to date the buildings in Athens chronologically according to the stone used, beginning with the limestone of the Acropolis, then the limestone from the Piræus, next a conglomerate from the neighbourhood of Athens; as in sculpture, where the limestone was followed in succession by the marbles of Hymettos, Paros, and Pentelikos. Even such apparently insignificant objects as clamps are subject to changes of form, and help in dating structures. It has been demonstrated with the help of clamps that a structure on Corfu (Kardaki, Cardacchio), which Semper and others considered very ancient, in reality only belongs to Hellenistic times. But these are simply guides in our studies. It will be well to show by a few examples that in important questions also new discoveries have led in entirely new directions.

Dörpfeld had discovered in the ruins of Troy and Tiryns that the walls of the houses had consisted of stone only immediately above the ground, and the wall above this course had been made of sun-dried bricks, to which, as is still the case in Greece, wooden beams were added, inserted both longitudinally and transversely to give increased solidity. This mode of construction had to be also assumed for the ancient Temple of Hera at Olympia. Here, above the foundation, only the course of freestones (orthostates) had been preserved, while the

remainder of the walls, softened by the rain, had turned into mud and covered all. Obviously the orthostates were intended to preserve the sun-dried bricks from the damp, and a plaster covering and a projection of the roof afforded some further protection. Traces have been discovered of the projecting ends of the walls or antæ, of upright wooden beams, which served as supports for the sun-dried walls. Pausanias tells us that in the second century A.D. one of the columns in the Opisthodomos of the Heraion was of wood; the conclusion was evident that at one time all the columns of the temple must have been of wood, like the columns described in Homer and Mycenæan columns. This was confirmed by the observation that the existing stone columns of the temple present great differences in their proportions and capitals, varying from the heavy and compact form of the sixth to the slender conventional forms of the fourth and third centuries. Apparently they had gradually replaced the older wooden columns, beginning on the weather side. There is, however, great confusion, so that frequently an early column is found immediately beside a late one, a conclusive proof that they were not substituted in number, but singly, according to the need of the moment. No trace has been found of the entablature, which conclusively proves that it must have been of wood to the last, and thus perished. Only roof tiles and a huge acroterion of painted terra-cotta have been found. Whether these date from the original building or from a reconstruction, when the sloping tile roof replaced a horizontal roof of beams covered with clay, depends on the date of the temple, a question which would here lead us too far.

This exposition of Dörpfeld's (1884) threw considerable light on the connection between the early Doric temples and the structures of Ægean times. Peculiarities of stone construction, such as the meaningless double height

of the lowest course of stones compared with the upper courses, or the slightly projecting columnar form of the anta, proved to be remains of the old construction of wood and clay. The column, it is true, had to be completely altered in the transition from wood to stone construction; the narrowing of the wooden column towards the base (as in a modern chair or table) gave place in the stone column to a narrowing towards the top. A connection could, however, still be traced in the capital; the occasionally decorated torus of the Ægean capital developed into the curved echinus of the Doric, below which, in the two older temples at Pæstum, there was still preserved a trochilus with leaf decoration. The connection between the two forms was made clear when Puchstein pointed out in 1899 that Poseidonia-Pæstum had been founded by Achæans, and the only capital of this form found in Greece is in the Achæan citadel of Tiryns. We are obviously dealing with an Achæan tradition derived from the heroic age.

Although Dörpfeld's theory in regard to the Heraion has not yet been generally accepted, it appears to me to be correct and well maintained in face of opposition. Dörpfeld's investigations in regard to the original plan of the Propylæa have received a consensus of approval. After the medieval tower had been removed from the Acropolis in 1876, and important results attained in regard to the south wing of the Propylæa, Richard Bohn published in 1879–80 the plan anew without, however, gaining certainty on all points. The plan of the south wing with a pillar projecting westwards from the alignment and the formation of the roof of both wings remained obscure; besides which, on the inner side of the Propylæa the outer walls of the middle structure preserved a number of bosses on the marble, indicating that they had been left unfinished, while certain holes and projecting blocks could not be explained by the existing

building. By close scrutiny and by availing himself of the hints furnished by the building as only a trained architect could, Dörpfeld succeeded in reconstructing the plan of Mnesikles. He proved that the plan had been far more extensive, but, in consequence of interruptions, had to be curtailed. As originally planned, the great gateway would have occupied the entire west side of the Acropolis, to the edge of the steep rocks on either side. The middle structure on the inside was to have been flanked by halls with columns. The hall to the north was partially carried out, while toward the south it had not been possible, owing to the sanctuary of Artemis Brauronia. This wing had to be greatly reduced. The case was the same with the exterior. While to the north the wing was built according to the plan, and still proudly towers above its lofty base, to the south upon the projecting bastion was the sanctuary of Athene Nike, who had a marble altar here, and to whom it had been decided, twenty years earlier, to erect a temple. If the plan of Mnesikles had been carried out, the already limited space for the temple of the city deity, the Giver of Victory, would have been so much cut down as to render its erection almost impossible. Mnesikles had, therefore, to restrict his great plan. Instead of a broad hall occupying the entire width of the bastion, and corresponding in length to the northern wing, with a row of columns opening on to the Temple of Nike, he had to content himself with a compromise. The part facing north, towards the approach, is of the same length as the façade of the north wing opposite, but towards the west, where the altar stood, it was reduced so that the building was greatly mutilated. This was no solution, but evidently a makeshift, which also necessitated an awkward arrangement of the hip-roof, the traces of which Dörpfeld discovered. The architect evidently hoped for better times to complete his original plans, and he carried out

at least their foundations. However, the Peloponnesian war began, and the building remained unfinished, so that not even the marble bosses were removed nor the walls or floors finished. And Athens had other cares after the war. To the south of the stunted marble structure of Mnesikles the remains of an ancient Pelasgian wall formed the boundary between the sanctuaries of Artemis Brauronia and Athene Nike, and closed in the citadel. In the Middle Ages the gap served to provide a way by which the Frankish masters of Athens and their successors, the Turks, ascended the citadel. The north hall, in the inside, as far as it may have been finished, was pulled down, to make room for the office buildings of the Frankish Dukes, who used the Propylæa as their castle.

Dörpfeld's successful inquiry thus takes us immediately back to the history of Athens, and brings vividly before us events we otherwise only know in broad outlines from the records of historians. We owe to Dörpfeld the results of similar inquiries in regard to the Parthenon and to the different stages in the history of the temple which preceded it. Recently he has tried to reconstruct the Erechtheion, the great structural peculiarities of which have been a puzzle to many. Here again in his opinion the building had to be reduced almost to half its original plan. It would be premature to express any doubts before we have a complete statement of the arguments.

To the two Greek examples two Roman ones may be added. Until recently the Pantheon in Rome had been looked upon as the classical example of Roman architecture in the Augustan age. In the inscription above the portico we still read the name of the erector, Marcus Agrippa. But certain doubts existed. In the Pantheon of Agrippa the capitals of the interior columns had been of bronze from Syracuse, and had supported marble

caryatids by the Athenian sculptor Diogenes. There is no trace of either, and the attempt to account for this by assuming a partial rebuilding has been refuted by technical investigations. We know also from records that the structure of Agrippa was twice destroyed by fire, the first time during a great conflagration under Titus, in 80, and again when the building was struck by lightning in 110 under Trajan. But how could a building burn which consisted only of bricks, marble, and metal? Or how, even supposing we interpret the words "burnt" or "destroyed" not quite literally, could it be seriously damaged by fire? This was, however, not considered, but the statement, also on record, was simply accepted, that the Pantheon had been restored by Domitian, and later by Hadrian. All damages were thus made good, or if anything still remained to be done, there were the restorations also recorded, under Antoninus Pius and Septimius Severus. All doubts had thus been overcome, and the existing Rotunda remained as before, a building of the times of Augustus.

But in 1885 H. Dressel observed bricks stamped, according to Roman usage, in different parts of the round structure and the portico, dating from the times of Trajan and Hadrian, all before 126. (Brick stamps, it should be explained, are dated or have some chronological mark.) This same observation had already been made in the eighteenth century. Dressel came to the conclusion that the Rotunda had been strengthened or refaced in the time of Hadrian, not a very acceptable theory, in view of the inner construction of the wall, which is found in other parts, nor did it explain the stamped bricks in the portico. Exact technical investigations, carried on almost simultaneously by two architects, the Austrian, Joseph Dell, in 1890, and the Frenchman, Louis Chedanne, in 1891–2, demonstrated two facts: in the first place that the entire structure, the

walls and the dome, is of one date, exhibiting a skilfully planned scheme in the pillars, plinths, and discharging arches, and, secondly, that the tiles of Hadrian are to be found in the entire building. No doubt could any longer exist of the origin of the present Pantheon in the time of Hadrian—a fact of extreme importance for the history of Roman architecture. The age of Hadrian gained in splendour what that of Augustus lost; the history of vaulted domes had to be newly investigated. Agrippa's inscription on the portico corresponded to the custom of Hadrian to retain the name of the original builder on restored buildings, and to leave to him all the honour. To judge from the character of the inscription, Hadrian must have used the original one; which is some help in indicating the form of the Pantheon of Agrippa. The front must have been in a straight line. How was it in other respects? Had it the usual oblong form of a temple? Or was it a round building like that of Hadrian, without a vaulted dome, but with a wooden and therefore inflammable roof? The investigations of Chedanne and of an Italian commission under L. Beltrami in 1892–3 did not come to any definite conclusions, but it is probable that the Pantheon of Agrippa had been of a round form.

If the age of Augustus has had to renounce the Pantheon, it has, on the other hand, gained the Ara Pacis. The evidence is very slight that has come down to us of this altar of the Augustan goddess of peace. In literature we do not find it mentioned. Augustus, however, in the inscription which records his administration (p. 105) tells us that the senate in the year 13 B.C. decided to erect this altar, and to institute an annual sacrifice in gratitude for his return after a long absence. Other inscriptions record that the altar was founded on 4 July, in the year 13, and consecrated 30 January, in the year 9. When Friedrich von Duhn in 1879 tried to bring the

scattered reliefs together, he assumed a monument of extraordinary size, and a great part of the sculpture he thought lost. Fifteen years later Eugen Petersen examined the architectural remains, which until then had not been noticed, and while deliberating with the architect, Victor Rauscher, came to the conclusion that the monument must have been of much smaller proportions. According to this theory the altar had been surrounded by a marble wall about six metres high ; the length and breadth of this enclosure amounted to 10·16 metres. The decoration on the inner side of the walls consisted mainly of delicately worked festoons, while the walls of the exterior were covered below with an equally beautiful design of creeping plants, and above this with a frieze 1½ metre high. On this, from a symbolical centre at the back, the imperial family and the senate walk in solemn procession towards the entrance, to witness at the altar the sacrifice to the goddess of peace. As Petersen restored the whole in 1902, it was a monument worthy to form the new central point of the history of Augustan art.

The fragments, which had come to light partly in the cinque-cento, partly in 1859, were all from one site ; they had been taken from the earth under the Palazzo Fiano on the Corso. The remains of this proud monument which, on the occasion of the Historical Congress in Rome, in 1903, was restored in a cast by A. Pasqui, seemed of sufficient importance to warrant a continuation of the excavations. During the winter 1903–4 the Italian Government undertook it under the directions of Pasqui and Petersen. It was necessary to dig six metres below the present street level, and under the foundation walls of surrounding buildings, to search in underground water for the remains of the altar enclosure. But they were finally found, and the length of the side walls corresponded to a centimetre with Petersen's measure-

ments. The entrance side was, however, 1·20 metre wider, but only because the door was so much wider, to afford a convenient opening for the procession and sacrificial animals. These were extraordinary proportions, which could no more have been foreseen than the fact that an opening in the rear corresponded with the front entrance. Thus, although certain details in Petersen's plan had to be modified, on the whole the reconstruction of the monument was a brilliant demonstration of the accuracy which can be attained by methodical and penetrating criticism. The result proved a new and valuable addition to the history of art.

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The examples quoted will have afforded the reader some insight into the scientific work of Archæology. As science has influenced excavations by new points of view and methods, these again have greatly influenced science and revolutionized her aims. Not this alone, we have seen how other factors have contributed their influence. Although philology has taken a second place, it does not cease to be helpful to archæology, and epigraphy above all. What should we know of the Ara Pacis without inscriptions? Nothing. These remains would fill us with perplexity. Or, again, is Bœthos, the creator of the "Boy and the Goose," a native of Karchedon (Carthage), as the manuscripts of Pausanias declare, and is the name, as Schubert surmised, merely a Greek rendering of a Punic Ezra or Bonith? or was he born at Kalchedon (Chalkedon), as Otfried Müller conjectured? Archæologists and philologists would be discussing this still, if an inscription found in Rhodes had not decided in favour of Müller, and given, at the same time, the date of the artist as in Hellenistic times, at the beginning of the second century. What embittered discussions have taken place since Winckelmann and Lessing respecting

the date of the group of the Laocoon, what floods of ink have been poured forth upon the critical passage in Pliny! At first the date wavered from the third century B.C. to the first A.D. Then again the group was supposed to be later than the giant altar from Pergamon (about 180), while some adhered to the third century. Then upon the evidence of inscriptions the date was fixed at *c.* 100 B.C.; later, according to Rhodian inscriptions, the middle of the century was fixed on. Since then this date has been confirmed by inscriptions, which can be definitely dated, so that the supposed climax of Hellenistic sculpture must be placed at the very end of Hellenic art. A sundial found in Tenos in 1905 bears an inscription stating that the donor, Andronikos of Kyrrhos, whom we know as the founder of the Tower of the Winds in Athens, was a native of the city of Kyrrhos in Macedonia, and not a Syrian, as we had until then believed.

And not only inscriptions on stone, which stand midway between literary and monumental evidence, but the science of "Papyrology" recently recognized as a separate branch of philology, which draws its treasures continually forth from the dry sands of Egypt, renders valuable services to the history of art. How long had the date of Polykleitos wavered, until a list of victors on a papyrus found at Oxyrhynchus, assigned him his place definitely near Phidias (p. 321).

The more the study of style becomes dominated, as we have already marked, by the subjective factor, so much the more wholesome and indispensable to archæology will prove the checks and aids which it receives from sciences like philology and epigraphy which follow rigid methods. It is not long since the modern change of attitude towards all questions also affected archæology, and ancient statues changed their makers as quickly as the paintings in our galleries—as many opinions as heads. It was a necessary stage of development in

the emancipation of stylistic analysis. Gradually more repose has come. In the place of a continuous striving for something new, a more thoughtful deliberation has asserted itself, and many an "obsolete" conception or attribution has again come to light like a diver from a whirlpool, while numerous ephemeral creations have vanished in the darkness below. Only such a foundation is perfectly firm, as has been based on incontestable documentary evidence.

The mass of newly-acquired works of art has also had some less desirable results. It has become impossible for an individual student to follow all discoveries or finds in detail. As in other fields of knowledge or research, a division of labour has taken place in archæology. One man may confine himself to architecture, or even only a part of it; another will concern himself with sculpture only; while another will limit himself to red-figured vases. A fourth thinks he can afford to ignore Hellenistic or Roman art. It has certainly become necessary to specialize, so as to study thoroughly the constantly accumulating mass of new monuments and questions; and nothing is less edifying than the habit of dabbling in special problems without sound knowledge. But the individual worker must always remain conscious that his province is only a small section of a vast whole. Even the popular Histories of Sculpture are far from being Histories of Art. Useful, nay indispensable, as specialists are, none of them should forget Schiller's words: "Ever strive towards the Whole, and if thou canst not become a Whole, attach thyself as a ministering member to a Whole."

No one to-day could undertake, with impunity, such a task as Karl Otfried Müller undertook in his "Handbuch der Archæologie" in 1830: *vestigia terrent!* The co-operation of many investigators would be required, but, at the same time, it would be needful for all to

keep the common aim in view, so that no series of disconnected chapters should arise, but that one spirit should animate the whole and strive towards the whole.

Another point must be considered. While in former times archæology devoted too much time to the explanation of works of art, the discovery of so many monuments of importance for the history of art has led to an equally exclusive emphasis of the historical aspect. This is to run to the opposite extreme. Philology has learnt more and more clearly to see that one of the first essentials is the comprehension of the texts, such as is effected by the art of exegesis or hermeneutics, and that the history of literature can only be safely based upon such a foundation. It is just the same in archæology. We need not necessarily return to the old philological mode of explanation, testing the picture by the standard of the written word. The work of art has a language of its own, which it is our task to understand and to explain. There is not only a written but a pictorial tradition, which follows its own laws. But it does not appear right to me—though these may be unwelcome reflections—to appreciate in a work of art only the form, in a picture the colour, and to declare the content more or less indifferent. Least of all can this be the case in ancient art. The painter Nikias observed that the subject formed a part of painting. Ancient art knows as little as ancient life of an absolute mastery of form. The Athenians only considered the person perfect who combined beauty with an inner efficiency. And ancient art is not different. It may be conceded that Lysippos said the last word in perfecting Greek art; yet Phidias ranks above him, as his content is richer and higher, and his form equals his content. The form is only the robe, which the content creates for itself. Content and form are inseparable and one. It is only their relation to one

another which determines the value of a work of art, and is the true object of research.

May the young archæologists of the new century, for whom the old century has acquired so rich a heritage, not pass unheeded these warnings of a veteran. Our science, I am convinced, will reward them!

PUBLIC LIBRARIES

CHRONOLOGICAL TABLE

1790. " Antiquities of Athens," Vol. II, 1787.
1792. Massi, Indicazione Antiq. del Museo Pio Clementino.
1797. Treaty of Tolentino: Roman antiques delivered to France.
1798–1801. Bonaparte's Expedition to Egypt.
1799. Pompeii: excavations by Championnet.
1800–3. Athens: Elgin works there.
1801. London receives spoils from Egypt.
1801. Opening of the Musée Napoléon.
1801–2. Clarke, Dodwell, Gell, and Leake in Greece.
1802. Wilkins in Athens (Entasis).
1804. Paris: Société des Antiquaires de France.
1804. Millin travels in Southern France.
1805. London acquires the Townley collection.
1805–6. Dodwell, Gell, and Leake again in Greece.
1807. Gell, " Ithaca."
1807. Wilkins, " Antiquities of Magna Græcia."
1807. Pompeii: Arditi's plan for excavations.
1808–15. Pompeii: excavations under Queen Caroline.
1810. Gell, " Argolis."
1810. Bröndsted, Cockerell, Foster, Haller, Koes, Linkh, Stackelberg at Athens; Cockerell examines the entasis of columns.
1811. Byron, " Curse of Minerva."
1811. Ægina: Pediment groups of the temple.
1812. Bassæ: the frieze.
1812. Burckhardt discovers Petra.
1812. Cockerell in Sicily.
1812. The Crown Prince Ludwig of Bavaria acquires the Æginetan sculptures for Munich.

1812–13. Gell, Gandy, and Bedford in Attica.
1814. London acquires the frieze from Bassæ.
1815. Visconti, " Mémoires sur des ouvrages de sculpture du Parthénon."
1816. The British Museum acquires the Elgin Marbles.
1816. " Antiquities of Athens," Vol. IV.
1816. The antiques of the Musée Napoléon are returned.
1816. Stackelberg in Rome.
1816–17. Laborde, " Monuments de la France."
1817–20. Ker Porter in W. Asia.
1818. Quatremère, " Lettres à M. Canova."
1819. Dodwell, " Class. and topogr. tour through Greece."
1820. Aphrodite of Melos.
1821. Nibby recognizes the groups of Galatians from Pergamon.
1821–2. The Athenian Acropolis bombarded by Voutier.
1822. Gerhard in Rome.
1822–3. Harris and Angell at Selinus.
1823. Panofka in Rome; Society of the Roman Hyperboreans.
1823–4. Hittorff in Sicily.
1824. Gerhard in Etruria.
1826. The Athenian Acropolis bombarded by Reshid Pasha.
1827. Corneto : wall paintings.
1827. Laborde in Syria and Arabia Petræa.
1828. Luynes at Metapontum.
1828–9. Vulci : discovery of vases.
1828–30. Egypt : Italian expedition under the direction of Rosellini and Champollion.
1829. Rome : " Instituto di corrispondenza archeologica."
1829. Olympia : French excavations at the Temple of Zeus.
1830. The conquest of Algeria begun.
1830. Berthouville near Bernay : the silver find.
1830. The Crimea : Dulrux opens the Kul Oba, near Kertch.
1830. Opening of the Museum in Berlin and the Glyptothek in Munich.
1830. " Antiquities of Athens," supplement.
1830–2. Semper in Italy.
1831. Pompeii : mosaic, Alexander the Great.

1831. Gerhard, " Rapporto volcente."
1832. Thomsen distinguishes the Stone Age, Bronze Age, and Iron Age.
1833–6. Athens : clearing of the citadel by Ross.
1833–7. Texier travels in Asia Minor.
1834. Dodwell, " Views of Cyclopian Remains."
1834–42. Serradifalco, " Archita della Sicilia."
1835. Athens : reconstruction of the Temple of Nike Apteros.
1835, 1837, 1843. Ross in Thera.
1836. Cerveteri : the Regulini-Galassi tomb.
1837. Rawlinson deciphers the inscription of Behistun.
1837. Athens : Pennethorne discovers the horizontal curves on the Parthenon.
1837. Athens : Archæological Society.
1837. Kramer on " The Origin and Style of Greek Painted Pottery."
1838. Fellows travels in Asia Minor.
1839. Discovery of the Sophocles statue.
1839–40 Fellows travels again in Lycia.
1840. K. O. Müller at Delphi, dies at Athens.
1840–1. Coste and Flandin travel in Persia.
1841. Society of Art-lovers in the Rhine countries.
1841. Schönborn discovers the Heröon of Giölbashi.
1842. Luni : Pediment groups of terra-cotta.
1842. London acquires the Nereid Monument from Xanthos.
1843–4. Lycia : Fellows undertakes another expedition.
1843–4. Ross in Rhodes ; inscriptions of artists.
1843–4. Lebas travels in Greece and Asia Minor.
1843–5. Egypt : Lepsius directs the Prussian expedition.
1843–6. Khorsabad excavated by Botta.
1844. Chiusi : The François Vase.
1845. Ross in Cyprus.
1845. Falkener at Ephesos.
1845–7. Layard excavates Nimrud.
1845–7. Paccard at Athens.
1846. Halicarnassos : reliefs sent to London.
1846. The " Apollo " of Tenea discovered.
1846. First find at Hallstatt.
1846. Boucher de Perthes begins a prehistoric publication.

1846. Athens: École Française.
1846–7. Penrose at Athens.
1848. Rome: paintings of the Odyssey in the Via Graziosa.
1848. Dennis, "Cities and Cemeteries of Etruria.'
1849. Rome: the Apoxyomenos of Lysippos.
1849. Rome: discovery of the Catacomb of Calixtus by De Rossi.
1849–51. Excavations at Kuyunjik by Layard and Rassam.
1849–52. Loftus in Babylonia.
1850–80. Mariette in Egypt.
1851. Penrose, "An Investigation of the Principles of Athenian Architecture."
1851–4. Oppert, Fresnel, and F. Thomas in Babylonia.
1851–5. Memphis: Mariette discovers the Serapeum.
1852. The Heraion near Argos examined.
1852. Beginning of the excavations in Southern Russia.
1852–3. Athens: Beulé uncovers the approach to the citadel.
1852–9. Newton in the Levant.
1853. Spratt discovers the Smintheion.
1853. Villanova: necropolis.
1853. First discoveries in caves in Southern France.
1853. The Marsyas of Myron recognized by Brunn.
1853. The Kairos of Lysippos recognized by Jahn.
1853. Vienna: Commission appointed for investigating and preserving architectural monuments.
1853–5. Loftus and Taylor travel in Babylonia.
1853–9. Brunn, "Geschichte der griechischen Künstler."
1854. First discovery of pile-dwellings in Switzerland.
1854. Sardes: Spiegelthal examines the Tomb of Alyattes.
1854. Jahn, "Einleitung zum Ketalog der Münchner Vasensammlung."
1855–60. Pompeii: the Stabian Thermæ.
1856–7. Conze visits the islands of the Thracian Sea and Lesbos.
1857. Vulci: Grotta François.
1857. Halicarnassos: Newton uncovers the Mausoleum.
1857–8. Cnidos and Branchidai: Newton.
1857–8. Rey travels in the Hauran.

1858. Athens: Odeion of Herodes Atticus.
1858. Lauersfort: phaleræ.
1859. Oppert investigates Babylon.
1859. Eleusinian Relief discovered.
1859. Lenormant discovers statuette of Athene.
1859. London acquires vases from Kameiros (Salzmann).
1859–62. Athens: the Stoa of Attalos.
1860. Renan travels in Phœnicia.
1860. Cyrene: Smith and Porcher.
1860. Boucher de Perthes, "De l'homme Antédiluvien."
1860–75. Pompeii: Fiorelli directs the excavations.
1861. Galatia and Bithynia: Perrot and Guillaume.
1861. Macedonia: Heuzey and Daumet.
1861–2. Delphi: Foucart and Wescher.
1861–2. De Vogüé travels in the Hauran.
1861–9. Rome: excavations on the Palatine.
1862. Athens: Bötticher (Acropolis), Curtius (Pnyx), and Strack (theatre).
1862. Teos: Pullan discovers slabs of the frieze of the Temple of Dionysos.
1862. Samos: Humann investigates the Heraion.
1862. Alesia: Napoleon III has excavations carried on.
1862–3. Nikopol: discoveries of tombs.
1863. Rome: Augustus from Prima Porta.
1863. Samothrace: Nike (Champoiseau).
1863. Friedrichs recognizes the Doryphoros of Polykleitos.
1863. Kirchhoff, "Studien zur Geschichte des griechischen Alphabets" (Chalcidian vases).
1864. Luynes travels in Syria.
1864. Thasos: Miller.
1864. Brunn works on the Julian Monument at St. Remy.
1864. First discoveries at La Tène.
1865. Cerveteri: archaic class of vases.
1865. Marzabotto: necropolis.
1865. Rome: the temple on the Capitoline.
1865. Alexandria: the sanctuary of Arsinoe.
1866. Smintheion and Temple of Athene at Priene: Pullan.
1866–9. Humann in Asia Minor.
1867. Brunn recognizes the Eirene of Kephisodotos.

1867–9. Cyprus : Cesnola.
1868. Schliemann visits the Homeric sites.
1868. Hildesheim : discovery of the silver treasure.
1869. Schöne, " Pompeianarum quæstionum specimen."
1869. Rome : House of Livia.
1869–74. Ephesos : Wood discovers the Artemision.
1870. Athens : the Street of Tombs at the Dipylon.
1870. Brunn recognizes the statues from the votive offering of Attalos.
1870. Conze, " Zur Geschichte der Anfänge griechischen Kunst " (Geometric style).
1870–4. Tanagra : the discovery of terra-cottas.
1871. Athens : the vases of the Dipylon.
1871. Bologna : the necropolis at the Certosa.
1871. Troy : Schliemann.
1871. Curtius, Adler, Stark, and Hirschfeld in Asia Minor.
1871. The Archæological Institute becomes a Prussian Government institution.
1871. Helbig recognizes the Diadumenos of Polykleitos.
1872. Rome : the reliefs of the tribune in the Forum.
1872. Michaelis, " Der Parthenon."
1872–3. Rayet and A. Thomas in the valley of the Mæander (Miletos, Magnesia, Priene).
1873. Samothrace : Austrian excavations.
1873. Delos : Lebègue investigates the Grotto.
1873. Mau distinguishes the periods of Pompeian wall paintings.
1873. Helbig, " Untersuchungen über die campanische Wandmalerei " (Hellenism).
1873. Fiorelli, " Relazione degli scavi di Pompei."
1874. Mycenæ : Schliemann.
1874. Teos : Hirschfeld investigates the ruins.
1874. The German Archæological Institute becomes an imperial institution.
1874–8. Stolze in Persia.
1875–80. Olympia : German excavations.
1875. Olympia : the Nike of Paionios.
1875. Samothrace : Austrian excavations.
1875–6. Dodona : Monteyko and Karapanos.

1875–6. Rome: Temple of the Capitoline Jupiter.
1876. Athens: Asklepieion: tower removed from south wing of Propylæa.
1876. Homolle investigates Delos.
1876. La Tène: beginning of excavations.
1877–94. Delos: French excavations.
1877–81. Telloh: de Sarzec's excavations.
1877. Olympia: the Hermes of Praxiteles.
1877. Spata: "Mycenæan" finds.
1877. Nissen, "Pompejanische Studien."
1877–1907. Carnuntum: excavations.
1878. Troy: Schliemann a second time.
1878. Knossos: Kalokairinos' excavations.
1878. Andreas at Persepolis.
1878. Rome: house in the Farnesina.
1878–86. Pergamon: Prussian excavations.
1879. Samos: Girard investigates the Heraion.
1879. Delos: flying Nike (Achermos ?).
1879. London: Society for the Promotion of Hellenic Studies.
1879. Klein, "Euphronios."
1879–81. Duhn collects remains of the Augustan Ara Pacis.
1880. Flinders Petrie begins to work in Egypt.
1880. Delphi: Haussoullier.
1880. Orchomenos: Schliemann.
1880. Menidi: vaulted tomb.
1880. Tegea: remains of pediment groups by Scopas.
1880. F. Lenormant in Southern Italy.
1880–2. Myrina: French excavations.
1881. Maspero begins to work in Egypt.
1881. Clermont-Ganneau travels in Phœnicia.
1881. Dörpfeld, Borrmann, and others study coloured architectural terra-cottas.
1881. Tunis under a French protectorate.
1881. Constantinople: Museum in the Tchinili-Kiosk.
1881–3. Assos: American excavations.
1881, 1884, 1886, 1888. Ramsay travels in Lycia and Phrygia.
1881–1903. Hieron of Epidauros: Greek excavations.
1882. Caria and Lycia: Austrian excavations (Giölbashi).

1882. Sardes: Dennis opens a tumulus.
1882. Clazomenai: first painted terra-cotta sarcophagi found.
1882. Samos: conduits of Eupalinos.
1882. Wilson visits Petra.
1882. Alatri: Bassel examines conduits.
1882. Robert distinguishes a class of vases as of Polygnotan style.
1882. Athens: "American School of Classical Studies."
1882. London: "Egypt Exploration Fund."
1882–90. Eleusis: Greek excavations.
1882–90. Adamklissi: Rumanian excavations.
1882–1903. Perrot and Chipiez, "Histoire de l'art antique."
1883. Nemrud Dagh: Humann and Puchstein.
1883. Milchhöfer, "Anfänge der griechischen Kunst (Crete).
1884. Crete: the grotto of Zeus on Mt. Ida, Italian excavations.
1884. Tiryns: Schliemann.
1884. Athens: Stamatákès begins excavations on the Acropolis.
1884. Elateia: French excavations.
1884. Rome: bronze statue of a pugilist.
1884. Wright, "Empire of the Hittites."
1884. Dörpfeld elucidates the most ancient Greek architecture.
1884–6. Naukratis: British excavations.
1884, 1886, 1887. Oropos, Amphiaræion, Greek excavations.
1885. Susa: Dieulafoy and his wife, Jane.
1885. Pamphylia, Pisidia: Lanckoronski, Niemann, and Petersen.
1885. Athens: British School.
1885. Dörpfeld on the Propylæa.
1885–6. Koldewey travels in Lesbos (Messa).
1885–6. Ptoïon: French excavations.
1885–91. Athens: Kavvadias directs excavations on the Acropolis.
1886. Athens: statue of a woman by Antenor.
1886. Aigai: German excavations.
1886, 1889, 1895. Athens: Dionysic Theatre, Dörpfeld.

1887. Sidon : tombs of princes, Alexander sarcophagus.
1887. Hierapolis : Humann, Cichorius, and others.
1887. Tell-el-Amarna : archives on clay tablets.
1887. Fayum : the first paintings on mummies.
1887. Delphi : Pomtow.
1887. Eleusis : Eubouleus.
1887. Rome : Ludovisi marble throne.
1887. Falerii : Italian excavations of a temple.
1887–8. Athens : the Stoa of Eumenes.
1887–8. Mantineia : French excavations, Praxitelean reliefs.
1887–8. Sanctuary of the Kabeiri, near Thebes, German excavations.
1888. Daphnai in Egypt : British excavations, coloured vases.
1888. Senjirli : first German excavations.
1888. Vaphio, near Sparta : Greek excavations, Mycenæan gold cups found.
1888. Schreiber, reliefs of fountains at Vienna (Hellenistic).
1888–9. Tegea : French investigations.
1888–99. Marzabotto : Italian excavations, plan of city.
1888–1900. Babylonia (Nippur) : American excavations.
1889. Illahun : British excavations.
1889. Neandreia : Koldewey.
1889. Locroi : Italian excavations (Ionian temple).
1889. Alatri : Italian excavations (temple).
1889–90. Sikyon : American excavations (theatre).
1889–90. Lycosura : Greek excavations, Damophon.
1890. Tell-el-Hesy : Flinders Petrie's excavations.
1890. Troy : Schliemann works there a third time.
1890. Magnesia : Hiller von Gärtringen, theatre.
1890–1. Senjirli : further German excavations.
1890–1. Megalopolis : British excavations.
1890–3. Rome : investigations on the Pantheon.
1891. Delphi : agreement with France.
1891. Rome : statue of Apollo found in the Tiber.
1891. Dörpfeld's investigations in regard to the Hypæthral temples.
1891–3. Magnesia : excavations of the Berlin Museum.
1892. Collignon recognizes the Kyniskos of Polykleitos.

1892–5. Heraion, near Argos : American excavations.
1892–4. Sicily and Lower Italy : Koldewey and Puchstein investigate temple ruins.
1892–7. Athens : German excavations on the Pnyx (Enneakrounos).
1892–1903. Investigations of the Germanic Limes.
1893. Furtwängler, " Meisterwerke der griechischen Plastik."
1893. Furtwängler recognizes the Lemnian Athene of Phidias.
1893–4. Troy : Dörpfeld.
1893–1901. Delphi : French excavations.
1894. Senjirli : German excavations.
1894. Samos : Böhlau investigates the necropolis.
1894. Rome : Petersen reconstructs the Ara Pacis.
1894. Reichel, " Die homerischen Waffen."
1894–5. A. Körte travels in Phrygia.
1894–5. Pompeii : House of the Vettii.
1894–5. Boscoreale : *villa rustica.*
1895. Tell-el-Amarna : British excavations (Amenhotep IV).
1894–6. Deir-el-Bahari : Temple of Hatshepsut.
1895. Borchardt begins work in Egypt.
1895. Boscoreale : the silver treasure.
1895. Rome : Column of Marcus Aurelius photographed.
1895. Hartel and Wickhoff, " Die Wiener Genesis."
1895–6. Didymaion : French excavations.
1895–9. Priene : excavations of the Berlin Museum.
1896. Conca : French and Italian excavations.
1896–7. Athens : the grotto of Pan, north-west corner of the Acropolis.
1896–1901. Thera : Hiller von Gärtringen.
1896–1907. Ephesos : Austrian excavations.
1897. Nagada : tomb of Menes.
1897. Kom-el-Achmar : discovery of statues.
1897. Susa : French excavations.
1897. Elche, near Alicante : female head discovered.
1897–8. Brünnow and von Domaszewski travel in Arabia.
1897–9. Thermos : Greek excavations.
1898. Vienna : Austrian Archæological Institute.
1898. Berlin : Deutsche Orient Gesellschaft.

1898–9. Alexandria : German excavations.
1899. Megara : German excavations, fountain.
1899. Howard Crosby Butler travels in Syria.
1899. Preuner recognizes the Agias of Lysippos.
1899–1901. Abu Gurab : sanctuary of Ra, German excavations.
1899–1904. Baalbec : German investigations.
1899–1907. Babylon : excavations by the "Deutsche Orient Gesellschaft."
1899–1907. Miletos : excavations by the Berlin Museum.
1899–1907. Haltern : excavation of a fort (Aliso ?).
1900. Gordion : A. and G. Körte.
1900. Alexandria : tomb at Kom-esh-Shukafa.
1900. Antikythera : recovery of bronze statues from the sea.
1900–1. Alexandria : German excavations.
1900–8. Knossos : Arthur Evans.
1900–8. Pergamon : new German excavations.
1901. Waldstein recognizes the Hera of Polykleitos.
1901. Ægina : Bavarian excavations of the Temple.
1901. Romano-Germanic Commission of the Archæological Institute.
1901. Strzygowski, "Rome oder Orient ?"
1902. Samos : Greek excavations at the Heraion.
1902. Delos : the French resume their excavations.
1902. Treu recognizes the Mænad of Scopas.
1902. Petersen, Ara Pacis Augustæ.
1902–4. Kos : German excavations of Asklepieion.
1902–4. Abusir : Borchardt investigates pyramids.
1902–4. Tell-Taannek : Austrian excavations.
1902–4. Lindos : Danish excavations on the citadel.
1902–4. Argos : Dutch excavations.
1902–5. Geser : British excavations.
1903. Pergamon : Herm found of the Hermes by Alkamenes.
1903. Dellbrück, "Drei Tempel am Forum Holitorium."
1903. Strzygowski, "Kleimasien ein Neuland der Kunstgeschichte."
1903–4. Rome : excavations to recover the Ara Pacis.
1903–5. Megiddo : German excavations.
1903–7. Assur : excavations by the Deutsche Orient Gesellschaft.

1904. Karnak : ancient statues found.
1904. Howard Crosby Butler and E. Littmann in Syria.
1904. Deir-el-Bahari : Temple of the Dead of Mentuhotep.
1905. Oberaden : Roman fort (Aliso ?).
1906. Abyssinia : German expeditions.
1907. Jericho : Austrian excavation.
1904–8. Leukas-Ithaca : Dörpfeld's excavation.
1908. A. Evans excavating at Knossos.
1908. German School excavating at Pergamon.
1908. French School excavating at Delos.
1908. British School excavating at Sparta.
1908. American School excavating at Corinth.
1908. American School excavating at Moklos in Crete.
1908. Austrian School excavating at Ephesos.

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